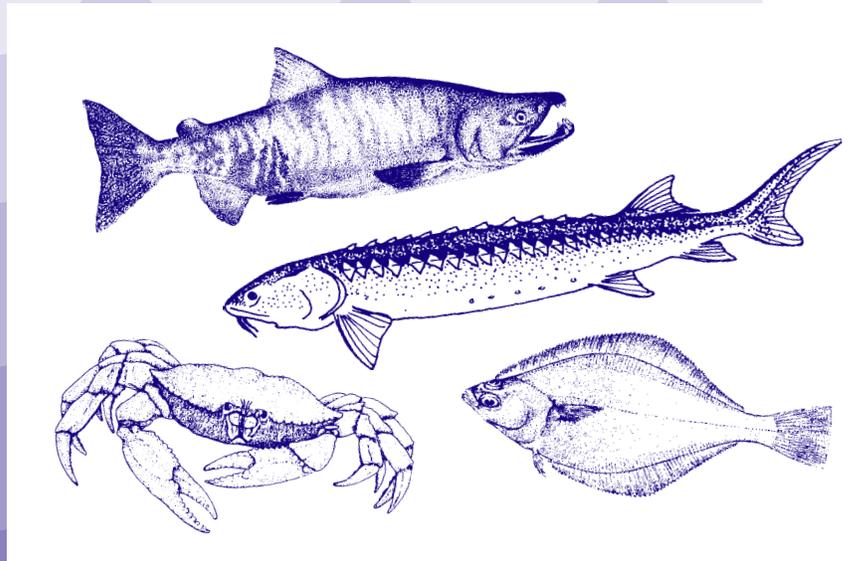


Washington State Sport Catch Report 1998



by Terrie Manning and Sheila Smith



Washington Department of
FISH AND WILDLIFE
Science Division

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Terrie Manning
Sheila Smith

State of Washington
Gary Locke, Governor

Washington State Department of Fish and Wildlife
Jeff P. Koenings, Director

Fish Program
Lew Atkins, Assistant Director

Department of Fish and Wildlife
Science Division
600 Capitol Way North
Olympia, Washington, 98501

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Introduction

The Washington State Sport Catch report was first published in 1967 by the former Department of Fisheries. The report originally provided salmon catch estimates which were based on data from catch record cards (punch cards). By 1991, catch record card data were collected for salmon, sturgeon and halibut and supplemented with field or creel survey data where and when possible to improve catch estimate accuracy. Over time the report expanded to include shellfish and marine fish estimates. Food fish (salmon, sturgeon, halibut, marine fish and shellfish) estimates were made on a calendar year basis from January 1 through December 31.

Since 1950, the former Department of Game (renamed Department of Wildlife in 1985) has published steelhead harvest reports based on catch record card data and creel surveys. Game fish (steelhead) estimates are summarized from May 1 of one year through April 30 of the next year. This is to better capture the results of steelhead “run years”, which typically span two calendar years.

On March 1, 1994, the former Departments of Fisheries (WDF) and Wildlife (WDW) merged to form the Department of Fish and Wildlife (WDFW). This marks the fifth combined report covering both “food fish” and “game fish.” Delayed due to budget and staffing constraints, the 1998 edition is being published in February 2001.

Sport Licenses and Catch Record Cards

In 1998, the following licenses and catch record cards were required to fish in Washington:

- A **personal use food fish license** was required for resident anglers over age 14, and for all non-resident anglers, to fish for anadromous fish (except steelhead) and marine fish. This license was available in resident annual, resident senior (ages 70 and over), non-resident annual, three-consecutive-day, and one-day formats. In addition, a free **catch record card** was required of all anglers of all ages to fish for salmon, for halibut in Puget Sound and the Strait of Juan de Fuca, and for sturgeon in the Columbia River, Grays Harbor, Willapa Bay and all tributaries of these three systems.
- A **game fish license** was required for resident anglers over age 14, and for all non-resident anglers, to fish for game fish (warm water species such as bass, panfish, whitefish and trout). This license was available in annual, one-day and three-consecutive-day formats. Reduced-fee licenses were available for non-resident juveniles and resident seniors (ages 70 and older). A steelhead license was required in addition to the gamefish license for all those anglers over 14 who wished to fish for steelhead. A free **catch record card** was also required of anglers of all ages to fish for steelhead.

- A **personal use shellfish/seaweed license** was required for resident and non-resident harvesters over age 14. A non-resident reduced-fee three-consecutive day license and a reduced-fee annual license for resident seniors (ages 70 and over) was available. Unlike salmon, sturgeon and steelhead, catch record cards were not issued with shellfish licenses since field sampling and creel surveys were used to estimate total sport shellfish catch.

Table *I* shows license sales for 1997 and 1998, based on a direct count of sales. Tables *2*, *3* and *4* show the estimated number of salmon, sturgeon and steelhead catch record cards issued. Note that the number of catch record cards issued shown in these tables are estimated from the catch record card databases, therefore cannot be directly compared to the license sales number. These numbers cannot be compared since anglers under 14 and over 70 are required to obtain a catch record card but not a license. Also, not all dealers return their catch record card stubs, nor do all anglers return their catch record cards, therefore, correction factors are applied.

Methods

Sport harvest estimates are made in Washington State using various methods. These include catch record cards for: salmon and steelhead statewide, sturgeon in the Columbia River, Grays Harbor and Willapa Bay and halibut in Puget Sound and the Strait of Juan de Fuca. Estimates from catch records cards are available six months to one year after the end of the season. Creel and mail surveys are carried out for salmon, sturgeon, steelhead, halibut, and shellfish in areas where management requires more timely estimates. Creel surveys consist of checking anglers who are exiting the fishery and asking specific questions about catch and effort. The creel survey estimates for some species and areas are substituted for catch record card estimates (this is noted in the tables).

The methods used produce estimates of sport harvest which have some level of uncertainty. This uncertainty, or variance, is estimated and expressed with confidence levels which are not provided in this report. These variance estimates are available upon request.

Ocean Quota vs True Catch Data

Sport catch data from coastal areas 1 - 4 were reported using “port sampling” (creel survey) catch estimates. Such estimates were derived by monitoring daily landings at four coastal ports: Ilwaco, Westport, La Push, and Neah Bay. Catch is reported in the area where the fish was caught and not the area where it was landed.

Statistical Months and Statistical Weeks

Some catch data (i.e. salmon and bottomfish) are reported using statistical months or statistical weeks. Statistical weeks (defined as Monday-Sunday) are consecutively numbered weeks beginning on January 1st and continuing through week 53 or 54 December 31st. The first and last weeks of any year usually contain less than 7 days. Statistical months are made up of a set number of statistical weeks which approximate calendar months but do not coincide with calendar month start and end dates. For example, in 1998, the statistical month of January begins on January 1st and ends February 1st and the statistical month of February starts on February 2nd and ends March 1st. Since some data are reported using statistical months, as opposed to calendar months, some catch may be reported during what appears to be a closed period.

Salmon

Annual sport salmon catch estimates for 1964 through 1998 are shown in Table 5. In 1998 a total of **156,802** salmon were caught in marine areas, plus an additional **78,667** salmon in freshwater. The marine totals by species, as shown in Table 6, were: **34,424** chinook; **113,766** coho; **8,321** chum; **201** pink; and **90** sockeye. Freshwater species breakdowns show: **26,757** chinook; **24,325** coho; **10,618** chum; **3** pink; **46** sockeye; **16,780** jacks (all species combined); and **138** unknown species.

Catch record cards are used to estimate sport salmon catch in marine and freshwater areas with some exceptions. In marine areas, creel survey estimates were substituted for the catch record card estimates in ocean areas 1-4 (excluding area 2.1 Willapa Bay and area 2.2 Grays Harbor), and in area 5 August 11-September 7. Creel surveys were done in area 5 and results are provided in Table 24. In freshwater areas, creel survey estimates were substituted for the catch record card estimates in the Lower Columbia River February - October. All other estimates are from catch record cards.

Sturgeon

There are two species of sturgeon present in Washington state: the green sturgeon *Acipenser medirostris* and the white sturgeon *Acipenser transmontanus*. Both species are anadromous and spawn in large river systems. Green sturgeon spend most of their lives in the marine environment and are not readily caught in Washington sport fisheries. They are not believed to spawn in any of the Washington river systems although they are seasonally abundant in Washington coastal bays and estuaries. White sturgeon migrate great distances in the ocean as well but, unlike green sturgeon, are able to complete their life cycle in freshwater. White sturgeon are readily caught in sport fisheries and are popular as a game fighting fish and are

considered by many as gourmet fare. They are the largest freshwater fish in North America with historical accounts of individuals approaching 20 feet in length and 1 ton in weight. Sturgeon subsist on a variety of foods including Columbia River smelt, anchovies, lamprey eels, clams, shad, and salmon carcasses. They are known for their longevity with individuals sometimes living over 100 years. White sturgeon are also known for their delayed maturation with males reaching sexual maturity at about 15 years of age (4½- 5 feet in length) and females at about 23 years of age (~6 feet in length). White sturgeon spawn throughout the Columbia River basin, although populations farther upstream are generally not as healthy as those living closer to the ocean. They spawn in the spring and early summer months in the mainstem Columbia River in areas where water velocities are highest. This reliance on high velocity, free-flowing river reaches for spawning is largely responsible for the decreased population abundance and productivity farther upstream in the Columbia River basin where hydroelectric development has most affected sturgeon populations.

The distribution of sturgeon harvest and the amount of restriction on sturgeon harvest within the Columbia River basin generally reflects the relative health and productivity of these sturgeon populations. Sturgeon harvest management relies on extensive research to provide an understanding of the population dynamics and the factors limiting productivity of specific sturgeon populations within the Columbia River. Abundance estimates and population simulation models are used to set long term sustainable harvest limits for the most heavily exploited populations. Management goals are based on allowing enough fish to survive harvest to replenish the older-aged spawning population. The most frequently used sport harvest management strategies are population-specific harvest quotas, slot limits, daily bag limits, and annual possession limits for those sturgeon populations that can sustain a harvest. Harvest management responsibilities in the Columbia River are jointly shared by the state of Oregon and the four Columbia River treaty tribes (Yakama, Umatilla, Warm Springs, and Nez Perce) in those river reaches where there is joint jurisdiction. Specifically, Washington and Oregon share management responsibility from the mouth of the Columbia River upstream to a point approximately 14 miles upstream of McNary Dam and, by policy directive, adopt concurrent regulations for fisheries in those areas. Washington, Oregon, and the four Columbia River treaty tribes coordinate sturgeon management in the three reservoirs between Bonneville and McNary dams through the Sturgeon Management Task Force, which is comprised of technical and policy representatives from each agency and tribe.

The white sturgeon population in the lower Columbia River downstream from Bonneville Dam is the healthiest in the species' range. Consequently, most of the sturgeon catch and effort in Washington waters occurs in this river reach. In 1998 Washington and Oregon managed for a catch quota of 53,840 white sturgeon in the lower Columbia sport fishery. Sport regulations for this fishery included a 42-60 inch legal size slot, a one fish daily bag limit allowing anglers to continue to catch and release after retaining their one sturgeon, and an annual bag limit of 10 sturgeon per angler. The actual combined white sturgeon catch for Washington and Oregon anglers in the lower Columbia fishery was 41,200. It was believed that high water conditions in the summer estuarial fishery affected the emergence of anchovies and other bait fish into the

estuary and thus compromising sport fishing success. It was noted that a significantly greater proportion of the catch was of larger sized fish indicating good survival of sturgeon through the fisheries.

The three lowermost reservoirs in the Columbia River between Bonneville and McNary dams are intensively managed under the auspices of the Sturgeon Management Task Force (SMTF). Sport regulations in Bonneville Reservoir were the same as those in the lower Columbia River downstream from Bonneville Dam. Regulations were more prohibitive in areas upstream from The Dalles Dam where the legal size slot was 48-60 inches. In 1998 the SMTF set annual sport harvest guidelines for white sturgeon of 1,520 in Bonneville Reservoir, 600-800 in The Dalles Reservoir (a dispute within the SMTF on allocation between sport and tribal commercial fisheries resulted in a management range for harvest), and 560 in John Day Reservoir. Washington and Oregon attempted to manage for a stable fishery season that kept harvest within these guidelines with a sturgeon retention season of January 1- June 30. However, this season was ineffective in the two lowermost reservoirs and the states had to prohibit sturgeon retention from April 20- December 31 in Bonneville Reservoir and from June 8- December 31 in The Dalles Reservoir to attempt to stay within the prescribed guidelines. The season was extended to November 22 in John Day Reservoir and was therefore closed to sturgeon retention from November 23- December 31. The resulting harvest by reservoir for Washington and Oregon anglers in 1998 was 1,630, 860, and 600 white sturgeon in Bonneville, The Dalles, and John Day reservoirs, respectively.

The reservoir sport fisheries upstream from McNary Dam operated under the same regulations as The Dalles and John Day reservoirs (48-60 inches, 1 fish daily bag limit), with the exception of Lower Granite Reservoir on the Snake River and the Columbia River and its tributaries upstream from Priest Rapids Dam to the U.S./Canada border where sturgeon retention was closed year round.

Outside the Columbia River basin, there are relatively productive sturgeon fisheries in most of Washington's coastal bays and estuaries. Most notable are the sturgeon fisheries in Willapa Bay and Grays Harbor (including the Chehalis River system). The white sturgeon caught in Washington's coastal areas are thought to originate in the lower Columbia based on tag recoveries from those fisheries. Sport regulations for these fisheries match those in the lower Columbia.

Total sport sturgeon harvest for 1998 for catch areas recorded, based on creel surveys and catch record card returns, was **25,940** fish. Of this total, **23,351** white sturgeon and **50** green sturgeon came from the Columbia River system (Table 29). Another **320** white sturgeon were harvested in the Snake River up to Lower Granite Dam, above which all sturgeon were required to be released.

Other areas for which sturgeon harvest is reported are: Willapa Bay **1,149** white, **12** green and **12** unknown sturgeon; Grays Harbor **670** white, **28** green and **24** unknown sturgeon. For monthly catch information, see Table **29**.

Steelhead

Steelhead harvest estimates are based on statewide catch record card returns and creel surveys for selected areas. Steelhead harvest is reported by “run year,” unlike other sport statewide harvest presented in an annual format. For example, steelhead that make up the 1998 winter/spring spawning season enter Washington rivers as early as March or April of **1997**, but will not spawn until early 1998. Wild steelhead spawning continues into late May or even June. Some of the **1998/99** fish will actually start their spawning run before the **1997/98** fish have finished spawning. For record-keeping purposes, May 1 is used as the starting point for each year's run. Steelhead caught during May through October are treated statistically as “summer-run” fish. Steelhead caught November through April are recorded as “winter-run” fish unless they are caught above the Bonneville Dam in the Columbia River; where they are recorded as “summer-run” fish.

In Table **33**, sport harvest of steelhead for **1998/99** is shown geographically by system and stream name. Monthly totals are given for hatchery (**marked** with adipose fin clip) and wild (**unmarked**) fish. This last designation is reliable only where 100% of the hatchery releases are marked. There occasionally are unmarked hatchery releases, usually from non-WDFW hatcheries. Please consult appropriate hatchery release records to confirm.

Marine Fish

Marine fish are those species commonly called “bottomfish” (though not all are necessarily caught on the bottom). This category includes all the rockfish (11 species are reported here); cabezon; lingcod and kelp greenling; Pacific halibut and other flatfish (sole, flounder, etc.); Pacific cod and other cod-like species (pollock, hake); sea perch (surf and pile); skates and rays; plus miscellaneous species.

Recreational ocean harvest of marine fish in catch areas 1-4, including halibut, is estimated from creel surveys. Table **37** shows the 1998 totals. These figures are compiled for the four defined marine fishing areas: Ilwaco (Columbia River mouth), Westport (Grays Harbor and Willapa Bay), La Push (Quillayute River mouth) and Neah Bay (just inside the Strait of Juan de Fuca).

The Puget Sound recreational harvest of marine fish, excluding halibut, is estimated using a statistical model that takes advantage of the previously documented relationship between sport salmon catch and effort, and marine fish catch and effort. These estimates, given in Table **39**, depend on the salmon catch record card estimates and the field survey sampling for catch per unit of effort for salmon and marine fish.

Sport catch of Pacific halibut in Puget Sound was estimated from halibut catch record cards. These figures can be found in Table 39.

Shellfish

Recreational shellfish harvest is estimated based on creel and flight sampling by WDFW personnel. The sport crab pot fishery is surveyed only in odd years, and therefore included in this report only during odd years.

Puget Sound recreational clam and oyster harvest estimates are shown in Table 40. Harvest totals for Manila and native littleneck clams, butter clams, cockles, softshell clams, horse clams, geoducks and oysters are shown for 27 areas. Estimates show 246,853 sport harvester trips gathered 701,086 total pounds of clams, and 902,009 oysters in 1998.

In the fall of 1998 and the spring of 1999 razor clamming was prohibited by the Washington State Department of Health (DOH) due to significantly high levels of Domoic Acid. Domoic Acid is a naturally occurring toxin produced by a microscopic marine diatom called *Nitzshia pungens*. Razor clams feeding on *Nitzshia pungens* may concentrate the toxin and become toxic to humans.

Short notice for emergency closures or cancellations due to marine toxins are a result of the specific sampling protocol established by DOH. The goal to have a resource safe for human consumption requires sampling no more than 7 days before the proposed opening by WDFW. Every effort is made to expedite the sample transport and analysis. There are still the limitations of low tide availability before the opening and the fact that it takes approximately 48 hours from the time the clams are harvested until the results can be announced. There is also the time required to use mass media to report any closure. New methods are being looked at to possibly expand these time periods and still have a resource safe to eat.

Sport Licenses

Table 1. Number and Value of Sport Personal Use Foodfish and Gamefish Licenses Sold in Washington, 1997 - 1998

Type of License	1997			1998		
	Price	Number	Value ¹	Price	Number	Value ¹
Resident Personal Use Foodfish (Ages 15-69)	\$8.00	233,708	\$1,870	\$8.00	208,951	\$1,672
Resident Senior Foodfish	\$3.00	18,211	\$55	\$3.00	13,693	\$41
Non-Resident Personal Use Foodfish (All Ages)	\$20.00	7,932	\$159	\$20.00	6,663	\$133
Three Consecutive Day Foodfish (Resident or Non-Resident)	\$5.00	98,251	\$491	\$5.00	69,791	\$349
Resident Gamefish (Ages 15-69; includes combination Hunt and Fish)	\$29.00 \$17.00	85,474 366,423	\$2,479 \$6,229	\$29.00 \$17.00	81,657 370,388	\$2,368 \$6,297
Resident Senior Gamefish	\$3.00	28,322	\$85	\$3.00	28,676	\$86
Resident, Three Consecutive Day Gamefish	\$9.00	12,598	\$113	\$9.00	13,577	\$122
Resident One-day Gamefish	\$3.00	25,565	\$77	\$3.00	28,052	\$84
Non-Resident Gamefish (Ages 15 and Older)	\$48.00	7,305	\$351	\$48.00	7,611	\$365
Non-Resident, Three Consecutive Day Gamefish	\$17.00	14,466	\$246	\$17.00	14,934	\$254
Non-Resident, One-day Gamefish	\$7.00	21,852	\$153	\$7.00	22,957	\$161
Resident and Non-Resident Steelhead Permit (Adult Ages 15-69)	\$18.00	80,418	\$1,448	\$18.00	66,441	\$1,196
Resident and Non-Resident Steelhead Permit (Juvenile under 15)	\$6.00	6,241	\$37	\$6.00	4,332	\$26
Resident, Personal Use Shellfish (Ages 15-69)	\$5.00	193,684	\$968	\$5.00	188,539	\$943
Non-Resident, Personal Use Shellfish (All Ages)	\$20.00	4,684	\$94	\$20.00	4,793	\$96
Three Consecutive Day Shellfish (Resident or Non-Resident)	\$5.00	19,433	\$97	\$5.00	18,878	\$94
Resident Senior Shellfish (Ages 70 and Older)	\$3.00	13,326	\$40	\$3.00	12,520	\$38
Recreational Fisheries Puget Sound Enhancement Stamp	\$10.00	40,252	\$1,403	\$5.00 \$10.00	11,755 127,989	\$1,339
TOTAL	N/A	1,278,145	\$16,395	N/A	1,302,197	\$15,644

Note: Catch Record Cards (also known as "Punch Cards") are issued free to anglers. A Foodfish License is required for each new Salmon Catch Record Card obtained except for residents under 15 years of age.

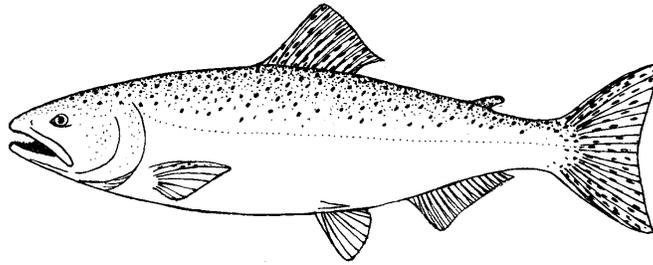
¹ Value in thousands

Table 2. Number of Sport Salmon Catch Record Cards Issued 1965-1998	
Year	Number of Catch Record Cards Issued
1965	387,875
1966	392,850
1967	472,225
1968	456,675
1969	471,525
1970	591,025
1971	541,600
1972	536,750
1973	568,825
1974	562,375
1975	576,075
1976	660,150
1977	641,050
1978	580,375
1979	487,875
1980	433,700
1981	463,561
1982	481,915
1983	481,025
1984	364,286
1985	403,523
1986	431,898
1987	475,459
1988	486,356
1989	509,534
1990	497,215
1991	489,394
1992	419,986
1993	447,986
1994	244,629
1995	416,707
1996	333,773
1997	331,511
1998	265,296

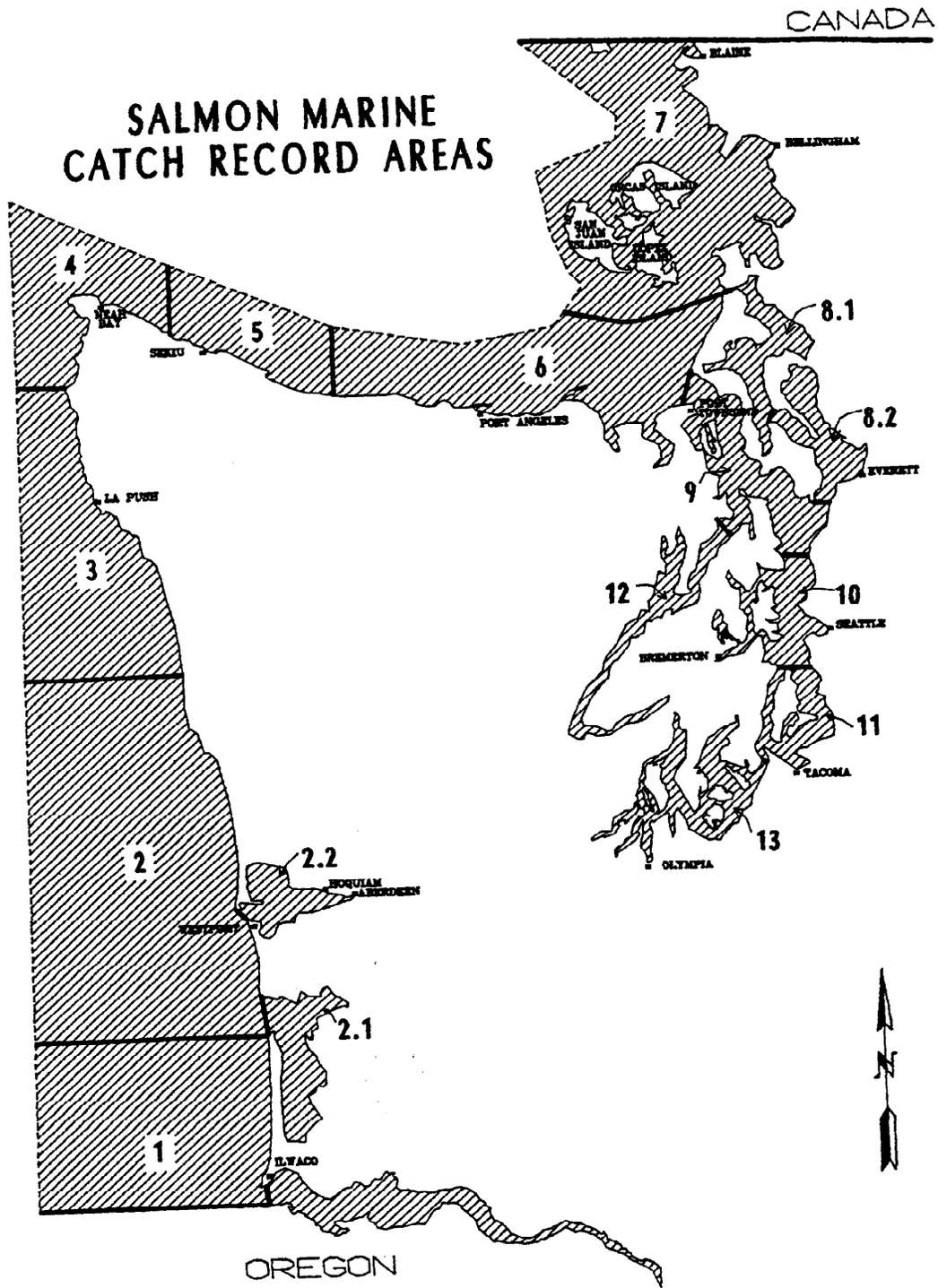
Table 3. Number of Sport Sturgeon Catch Record Cards Issued 1988-1998	
Year	Number of Cards Issued
1988	33,195
1989	35,576
1990	32,421
1991	32,396
1992	37,615
1993	43,067
1994	54,837
1995	62,572
1996	69,639
1997	76,806
1998	79,264

Table 4. Number of Sport Steelhead Catch Record Cards Issued 1948-1998	
Year	Number of Catch Record Cards Issued
1948-49	40,000
1949-50	50,000
1950-51	50,000
1951-52	62,500
1952-53	77,500
1953-54	89,341
1954-55	90,392
1955-56	88,500
1956-57	85,350
1957-58	85,425
1958-59	84,461
1959-60	87,878
1960-61	93,350
1962	144,980
1963	151,692
1964	160,375
1965	171,400
1966	187,525
1967	202,666
1968	202,750
1969	200,050
1970	142,610
1971	145,647
1972	153,977
1973	165,671
1974	145,051
1975-76	missing
1976-77	missing
1977-78	missing
1978-79	130,000
1979-80	136,000
1980-81	139,500
1981-82	132,000
1982-83	100,000
1983-84	101,800
1984-85	133,400
1985-86	121,500
1986-87	100,500
1987-88	102,000
1988-89	108,182
1989-90	106,666
1990-91	98,362
1991-92	98,328
1992-93	98,933
1993-94	94,913
1994-95	87,093
1995-96	101,303
1996-97	92,858
1997-98	68,341
1998-99	83,142

Salmon



SALMON MARINE CATCH RECORD AREAS



Description of Salmon Catch Record Card Areas

- | | | |
|------|------------------------------------|--|
| 1. | ILWACO | West of Megler-Astoria Bridge, north to Leadbetter Point. |
| 2. | WESTPORT-OCEAN SHORES | From Leadbetter Point, north to the Queets River, excluding Willapa Bay and Grays Harbor. |
| 2.1 | WILLAPA BAY | East of line from Leadbetter Point to Buoy 8 and then to Cape Shoalwater Light. |
| 2.2 | GRAYS HARBOR | East of the true north-south line through Grays Harbor Channel Marker 13. |
| 3. | LA PUSH | From the Queets River, north to Cape Alava. |
| 4. | NEAH BAY | From Cape Alava, north and inside Juan de Fuca Strait to the Sekiu River. |
| 5. | SEKIU & PILLAR POINT | From the mouth of the Sekiu River, east to Low Point, mouth of the Lyre River. |
| 6. | EAST JUAN DE FUCA STRAIT | From Low Point, east to the Partridge Point-Point Wilson Line, North to the line from Trial Island (near Victoria, B.C.), Navigation Buoy BW "R" Smith Island , Point Colville, Langley Point, and West of the Initiative 77 Line fronting Deception Pass. |
| 7. | SAN JUAN ISLANDS | All marine waters north of the Trial Island Line described under Area 6 to the United States - Canadian boundary. |
| 8.1. | DECEPTION PASS, HOPE ISLAND | East of line from West Pt. on Whidbey Island to Reservation Head on Fidalgo Island through Deception Pass, south of railroad bridges at north end of Swinomish Channel, north of Hwy 535 Bridge between Camano Island and mainland, and west of line from East Pt. Light on Whidbey Island to light on Camano Island (Saratoga Pass Light #2 FI Red 4 Sec.). |
| 8.2. | PORT SUSAN/PORT GARDNER | East of line from East Pt. Light on Whidbey Island to light on Camano Island (Saratoga Pass Light #2 FI Red 4 Sec.) and north of line from south tip Possession Pt. 110 degrees true to shipwreck on opposite shore. |
| 9. | ADMIRALTY INLET | All waters inside and south of Partridge Point - Point Wilson Line, south and west of a line from Possession Point 110 degrees true to the shipwreck, north of the Hood Canal Bridge, and north of the Apple Cove Point - Edwards Point line. |
| 10. | SEATTLE-BREMERTON AREA | From the Apple Cove Point - Edwards Point line to the line through the north tip of Vashon Island east - west. |
| 11. | TACOMA-VASHON ISLAND | From the north tip of Vashon Island to the Tacoma Narrows Bridge. |
| 12. | HOOD CANAL | All waters south of the Hood Canal Bridge. |
| 13. | SOUTH PUGET SOUND | All waters south of the Tacoma Narrows Bridge. |

FRESHWATER AREAS: RIVERS, STREAMS OR LAKES -Name of river, stream or lake, **except** for the **Columbia River**

BUOY 10	From Buoy 10 Line to Megler-Astoria Bridge
LOWER COLUMBIA	From Megler-Astoria Bridge to Bonneville Dam
MID-COLUMBIA	From Bonneville Dam to McNary Dam
UPPER COLUMBIA	Above McNary Dam

Year	Total	Freshwater	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8	Area 9	Area 10	Area 11	Area 12	Area 13
1964	475,662	28,988	111,385	103,094	11,055	45,051	46,309	13,912	16,186	5,528	40,289	21,466	24,476	7,923	-----
1965	942,223	54,509	279,225	275,457	23,694	57,606	53,620	23,477	18,803	10,253	58,004	28,368	43,077	14,130	-----
1966	756,896	52,948	203,806	176,447	28,262	78,016	33,887	23,748	23,575	5,729	60,135	22,533	24,235	23,575	-----
1967	1,063,440	135,250	315,594	214,661	53,325	84,871	55,401	32,601	29,878	6,125	61,662	18,564	20,861	34,303	-----
1968	877,276	61,663	210,693	284,923	23,075	73,556	67,734	36,245	25,489	3,621	45,511	17,785	19,135	7,846	-----
1969	876,648	79,905	200,379	270,777	21,054	80,945	75,902	46,227	23,748	3,695	28,059	16,589	19,976	9,392	-----
1970	978,395	135,974	269,232	303,372	36,894	46,659	30,579	26,027	21,842	5,690	43,648	23,200	24,265	11,013	-----
1971	1,344,818	145,904	342,928	446,738	39,682	87,184	71,947	39,573	28,355	5,189	54,920	35,225	27,332	19,841	-----
1972	1,138,926	121,432	307,938	353,113	31,278	61,704	45,446	45,058	29,536	3,097	42,968	32,942	35,962	28,452	-----
1973	1,095,360	147,554	236,385	348,406	49,900	48,645	33,347	40,308	14,852	3,966	52,935	42,574	61,919	14,569	-----
1974	1,320,420	88,048	334,664	320,467	74,832	80,362	50,319	53,222	36,318	5,491	76,518	69,341	105,110	25,728	-----
1975	1,399,375	101,531	308,475	331,565	57,356	59,451	48,975	74,336	37,626	7,726	100,089	78,832	162,072	31,341	-----
1976	1,749,560	100,601	433,026	543,295	70,133	68,670	63,966	102,639	55,396	21,688	88,737	62,607	61,562	24,405	52,835
1977	1,191,414	96,843	248,518	321,888	38,359	86,186	73,106	61,568	31,709	17,792	64,651	39,372	44,657	22,020	44,745
1978	1,107,852	86,845	220,548	269,338	24,439	52,270	59,400	68,849	36,293	13,229	73,187	56,479	48,018	26,801	72,156
1979	1,123,809	88,659	167,478	174,365	24,160	53,840	134,354	70,839	48,101	33,835	104,619	71,167	71,495	20,006	60,891
1980	852,879	105,461	158,883	163,748	19,146	29,500	39,587	52,663	24,457	18,432	60,072	52,128	57,751	17,138	53,913
1981	760,115	58,139	142,879	151,301	1,734	36,883	55,900	56,318	21,826	16,986	67,838	42,602	42,175	14,989	50,545
1982	749,995	91,849	115,838	158,005	9,857	42,716	67,611	33,870	12,947	9,940	49,853	49,727	51,975	8,672	47,135
1983	860,623	108,783	98,599	100,791	7,318	58,469	62,486	74,311	29,844	23,268	98,485	54,228	72,772	11,756	59,513
1984	561,428	142,170	79,792	16,631	167	6,604	39,276	67,246	29,985	17,442	79,526	24,130	28,781	5,158	24,520
1985	686,333	107,734	93,927	93,620	2,062	26,878	101,920	45,342	23,798	25,427	75,193	33,019	38,157	4,897	14,359
1986	830,644	115,469	156,275	98,421	2,553	25,027	138,951	71,544	27,550	26,822	79,730	33,686	33,891	3,460	17,265
1987	744,284	110,636	123,441	71,458	3,005	29,418	107,138	82,377	27,152	31,421	86,270	42,179	32,753	8,947	26,639
1988	719,409	168,594	142,979	62,001	3,341	19,576	107,935	47,483	22,225	16,514	47,109	28,020	22,202	2,420	12,689
1989	834,426	121,417	157,701	100,000	2,405	44,600	164,580	64,766	19,078	23,165	63,724	36,748	24,561	4,588	7,093
1990	824,171	107,934	114,722	102,984	5,809	48,329	223,012	54,848	12,797	14,865	57,875	47,519	25,555	1,618	6,304
1991	932,371	153,719	230,582	107,362	5,615	43,357	216,816	42,812	16,602	20,337	40,390	32,229	15,549	3,225	3,866
1992	573,102	90,032	86,754	71,684	2,332	25,906	108,876	30,894	12,515	15,131	47,157	51,338	18,198	6,303	5,982
1993	599,381	145,579	67,582	60,993	3,469	31,154	80,496	44,174	35,697	24,320	41,949	36,699	14,130	3,540	9,599
1994	156,825	61,142	1,069	60,358	Closed	Closed	518	1,184	8,322	5,218	6,978	23,279	25,360	8,905	10,305
1995	524,232	190,158	28,697	31,857	1,990	15,604	53,553	20,617	23,801	66,403	22,920	28,560	28,242	5,200	6,630
1996	391,202	161,424	21,391	29,059	1,901	8,750	41,820	18,103	15,486	15,580	20,343	18,972	25,417	6,408	6,548
1997	394,185	98,519	34,417	18,122	1,260	2,577	52,889	23,614	35,016	43,543	24,356	25,277	22,146	7,089	5,360
1998	235,469	78,667	10,102	13,647	762	8,045	24,509	6,657	5,801	14,504	24,324	16,674	17,272	7,782	6,723

Note: In 1976, several area boundary lines were changed resulting in thirteen catch areas instead of twelve. The changes were mostly reflected in catch Areas 8, 9, 10, and new Area 13. In 1989, catch Area 8 was subdivided into Areas 8.1 and 8.2 and catch Area 2 was subdivided into Areas 2.1 and 2.2. For comparative purposes, the catch for Areas 8.1 and 8.2 are totaled and entered under Area 8. Similarly, the catch in Areas 2.1 and 2.2 are included in the total catch for Area 2.

Marine Area	Number of Chinook	Number Of Coho	Number of Chum	Number of Pink	Number of Sockeye	Number of Jacks	Number Of Unknown	Total Salmon	Marine Angler Trips	Salmon per Trip
Ilwaco-Ocean (Area 1)	326	4,412						4,738	4,767	0.99
Ilwaco-Buoy 10 (Area 1)	3,448	1,916						5,364	18,830	0.29
Westport (Area 2)	1,693	7,655						9,348	7,941	1.18
Willapa Bay (Area 2.1)	944	385						1,329	n/a	n/a
Grays Harbor (Area 2.2)	1,731	1,239						2,970	n/a	n/a
LaPush (Area 3)	80	682						762	638	1.19
Neah Bay (Area 4)	88	7,957						8,045	6,307	1.28
Subtotal Coast	8,310	24,246	0	0	0	0	0	32,556	38,483	*0.73
Sekiui-Pillar Point (Area 5)	836	23,640	13	13	7			24,509	34,000	0.72
East Juan de Fuca (Area 6)	1,323	5,304	5	7	18			6,657	16,399	0.41
San Juan Islands (Area 7)	3,069	2,487	105	92	48			5,801	22,523	0.26
Deception Pass, Hope Island (Area 8.1)	508	1,550	25	12				2,095	5,244	0.40
Port Susan & Port Gardner (Area 8.2)	1,029	11,333	35	12				12,409	30,676	0.40
Admiralty Inlet (Area 9)	3,118	20,800	355	51				24,324	60,746	0.40
Seattle-Bremerton (Area 10)	3,486	12,483	693		12			16,674	37,684	0.44
Tacoma-Vashon Island (Area 11)	9,154	7,457	642	14	5			17,272	78,302	0.22
Hood Canal (Area 12)	347	3,048	4,387					7,782	18,937	0.41
South Puget Sound (Area 13)	3,244	1,418	2,061					6,723	45,434	0.15
Subtotal Puget Sound	26,114	89,520	8,321	201	90	0	0	124,246	350,125	0.36
Marine Area Totals	34,424	113,766	8,321	201	90	0	0	156,802	388,608	0.40
Freshwater Totals	26,757	24,325	10,618	3	46	16,780	138	78,667	-----	-----
Grand Totals	61,181	138,091	18,939	204	136	16,780	138	235,469	388,608	-----

**Subtotal Coast* salmon per trip is calculated using the coast subtotal minus the Grays Harbor and Willapa Bay catch.

Table 7. 1998 Sport Salmon Catch, Area 1 - Ilwaco: Ocean

Week Ending	Number of Chinook	Number of Coho	Number of Pink	Number of Sockeye	Number of Chum	Total Salmon	Marine Angler Trips	Salmon Per Trip
August 9	272	4,037				4,309	4,284	1.00
August 16	12	27				39	63	.62
September 6	42	348				390	420	.93
Total	326	4,412	0	0	0	4,738	4,767	.99

NOTE: Catch by species is presented by actual catch area and therefore may not correspond with catch by quota area statistics reported prior to 1995.

Table 8. 1998 Sport Salmon Catch, Area 1 - Ilwaco: River

Week Ending	Number of Chinook	Number of Coho	Number of Pink	Number of Sockeye	Number of Chum	Total Salmon	Marine Angler Trips	Salmon Per Trip
August 9	139	51				190	1,740	0.11
August 16	1,100	489				1,589	6,422	0.25
August 23	2,209	1,376				3,585	10,668	0.34
TOTAL **	3,448	1,916	0	0	0	5,364	18,830	0.29

NOTE: Catch by species is presented by actual catch area and therefore may not correspond with catch by quota area statistics reported prior to 1995.

** Includes some catch just above the Megler Astoria Bridge.

Table 9. 1998 Sport Salmon Catch, Area 2 - Westport

Week Ending	Number of Chinook	Number of Coho	Number of Pink	Number of Sockeye	Number of Chum	Total Salmon	Marine Angler Trips	Salmon Per Trip
August 9	589	2,983				3,572	3,506	1.02
August 16	876	3,606				4,482	3,492	1.28
September 6	228	1,066				1,294	943	1.37
TOTAL	1,693	7,655	0	0	0	9,348	7,941	1.18

NOTE: Catch by species is presented by actual catch area and therefore may not correspond with catch by quota area statistics reported prior to 1995.

Table 10. 1998 Sport Salmon Catch, Area 2.1 - Willapa Bay

Statistical Month	Number of Chinook	Number of Coho	Number of Pink	Number of Sockeye	Number of Chum	Number of Jack	Total Salmon
August	96	56					152
September	755	254					1009
October	74	56					130
November	19	19					38
Total	944	385	0	0	0	0	1329

Table 11. 1998 Sport Salmon Catch, Area 2.2 - Grays Harbor

Statistical Month	Number of Chinook	Number of Coho	Number of Chum	Number of Pink	Number of Sockeye	Number of Jack	Total Salmon
July	18	0					18
August	129	239					368
September	1,149	493					1,642
October	416	469					885
November	19	38					57
Total	1,731	1,239	0	0	0	0	2,970

Table 12. 1998 Sport Salmon Catch, Area 3 – La Push

Week Ending	Number of Chinook	Number of Coho	Number of Pink	Number of Sockeye	Number of Chum	Total Salmon	Marine Angler Trips	Salmon Per Trip
August 9	80	682				762	638	1.19
TOTAL	80	682	0	0	0	762	638	1.19

NOTE: Catch by species is presented by actual catch area and therefore may not correspond with catch by quota area statistics reported prior to 1995.

Table 13. 1998 Sport Salmon Catch, Area 4 – Neah Bay

Week Ending	Number of Chinook	Number of Coho	Number of Pink	Number of Sockeye	Number of Chum	Total Salmon	Marine Angler Trips	Salmon Per Trip
August 9	70	3,989				4,059	3,718	1.09
August 16	18	3,283				3,301	2,219	1.49
August 23	0	685				685	370	1.85
TOTAL	88	7,957	0	0	0	8,045	6,307	1.28

NOTE: Catch by species is presented by actual catch area and therefore may not correspond with catch by quota area statistics reported prior to 1995.

Table 14. 1998 Sport Salmon Catch, Area 5 - Sekiu - Pillar Point

Statistical Month	Number of Chinook	Number of Coho	Number of Pink	Number of Sockeye	Number of Chum	Total Salmon	Marine Angler Trips	Salmon Per Trip
February	178	0				178	1,200	0.15
March	137	0				137	925	0.15
April	183	0				183	1,233	0.15
June	2	6				8	N/A	N/A
July	1	10				11	N/A	N/A
August	251	20,455	13	7	7	20,733	20,412	1.16
September	84	3,165			6	3,255	10,230	0.32
October	0	4				4	N/A	N/A
TOTAL	836	23,640	13	7	13	24,509	34,000	0.72

NOTE: Estimates for August 11 - September 7 are from creel surveys; all other estimates are from catch record cards. Refer to Table 24 for creel survey estimates during August 11 - September 7, 1998.

Table 15. 1998 Sport Salmon Catch, Area 6 - East Juan de Fuca Strait

Statistical Month	Number of Chinook	Number of Coho	Number of Pink	Number of Sockeye	Number of Chum	Total Salmon	Marine Angler Trips	Salmon Per Trip
February	547	0				547	1,444	0.38
March	234	0				234	1,285	0.18
April	188	0				188	1,034	0.18
May	3	0				3	N/A	N/A
June	1	3				4	N/A	N/A
July	1	0				1	N/A	N/A
August	57	3,722	7	14	5	3,805	6,195	0.61
September	51	1,525		4		1,580	3,396	0.47
October	89	20				109	1,124	0.10
November	126	28				154	1,596	0.10
December	26	6				32	325	0.10
TOTAL	1,323	5,304	7	18	5	6,657	16,399	0.41

Statistical Month	Number of Chinook	Number of Coho	Number of Pink	Number of Sockeye	Number of Chum	Total Salmon	Marine Angler Trips	Salmon Per Trip
January	606	0				606	2,102	0.29
February	432	0				432	1,622	0.27
March	437	0				437	2,331	0.19
April	483	0				483	2,575	0.19
June	1	0				1	N/A	N/A
July	19	38	75	6		138	1,063	0.13
August	388	51	17	42		498	4,243	0.12
September	258	1,334			11	1,603	5,198	0.31
October	124	1,064			83	1,271	2,238	0.53
November	318	0			11	329	1,145	0.28
December	3	0				3	6	0.50
TOTAL	3,069	2,487	92	48	105	5,801	22,523	0.26

Statistical Month	Number of Chinook	Number of Coho	Number of Pink	Number of Sockeye	Number of Chum	Total Salmon	Marine Angler Trips	Salmon Per Trip
January	102	4				106	548	0.19
February	48	2				50	239	0.21
March	75	3				78	401	0.19
April	48	2				50	243	0.21
May	1	0				1	5	0.20
July	0	1				1	5	0.20
August	5	334	4		0	343	675	0.51
September	12	701	8	0	0	721	1,436	0.50
October	0	503			25	528	931	0.57
November	217	0				217	761	0.29
TOTAL	508	1,550	12	0	25	2,095	5,244	0.40

Statistical Month	Number of Chinook	Number of Coho	Number of Pink	Number of Sockeye	Number of Chum	Total Salmon	Marine Angler Trips	Salmon Per Trip
January	153	0				153	1,293	0.12
February	119	0				119	895	0.13
March	170	0				170	1,436	0.12
April	369	0				369	2,900	0.13
June	0	3				3	43	0.07
July	13	166	1			180	1,041	0.17
August	82	977	5			1,064	5,436	0.20
September	94	8,181	6		7	8,288	11,446	0.72
October	26	2,006			28	2,063	6,179	0.33
November	3	0					7	0.43
TOTAL	1,029	11,333	12	0	35	12,409	30,676	0.41

Statistical Month	Number of Chinook	Number of Coho	Number of Pink	Number of Sockeye	Number of Chum	Total Salmon	Marine Angler Trips	Salmon Per Trip
January	296	0				296	1,010	0.29
February	202	0				202	689	0.29
March	666	18				684	2,583	0.26
April	788	7				795	3,059	0.26
May	2	1				3	N/A	N/A
June	0	2				2	N/A	N/A
July	235	574				809	4,229	0.19
August	130	6,841	51		46	7,068	19,306	0.37
September	108	10,200			29	10,337	19,107	0.54
October	102	3,149			226	3,477	9,041	0.38
November	589	8			54	651	1,722	0.38
TOTAL	3,118	20,800	51	0	355	24,324	60,746	0.40

Statistical Month	Number of Chinook	Number of Coho	Number of Pink	Number of Sockeye	Number of Chum	Total Salmon	Marine Angler Trips	Salmon Per Trip
January	286	0				286	1,344	0.21
February	254	11				265	1,152	0.23
March	482	14				496	2,748	0.18
April	329	9				338	1,878	0.18
May	0	0				0	0	0.00
June	0	5				5	29	0.17
July	324	820		12	12	1,168	6,714	0.17
August	85	2,442			6	2,533	6,095	0.42
September	62	6,757			45	6,864	7,520	0.91
October	249	2,405			541	3,195	6,316	0.51
November	1,344	19			85	1,448	3,864	0.37
December	71	1			4	76	204	0.37
TOTAL	3,486	12,483	0	12	693	16,674	37,864	0.44

Statistical Month	Number of Chinook	Number of Coho	Number of Pink	Number of Sockeye	Number of Chum	Total Salmon	Marine Angler Trips	Salmon Per Trip
January	160	11				171	1,839	0.09
February	220	16				236	2,518	0.09
March	258	18				276	2,960	0.09
April	262	2				264	2,312	0.11
May	231	2				233	2,038	0.11
June	789	80				869	7,994	0.11
July	2,155	536		5		2,696	15,131	0.18
August	3,972	1,600	14		7	5,593	24,386	0.23
September	586	3,912			75	4,573	12,576	0.36
October	341	1,280			349	1,970	5,385	0.37
November	151	0			177	328	976	0.34
December	29	0			34	63	187	0.34
TOTAL	9,154	7,457	14	5	642	17,272	78,302	0.22

Statistical Month	Number of Chinook	Number of Coho	Number of Pink	Number of Sockeye	Number of Chum	Total Salmon	Marine Angler Trips	Salmon Per Trip
January	13	1				14	183	0.08
February	14	2				16	192	0.08
March	56	6				62	768	0.08
July	8	84			2	94	564	0.17
August	58	648			12	718	4,337	0.17
September	87	965			17	1,069	6,462	0.17
October	40	1,285			981	2,306	2,904	0.79
November	16	57			3,197	3,270	2,790	1.17
December	55	0			178	233	737	0.32
TOTAL	347	3,048	0	0	4,387	7,782	18,937	0.41

Statistical Month	Number of Chinook	Number of Coho	Number of Pink	Number of Sockeye	Number of Chum	Total Salmon	Marine Angler Trips	Salmon Per Trip
January	75	34				109	1,077	0.10
February	96	43				139	1,382	0.10
March	31	14				45	447	0.10
April	38	23				61	764	0.08
May	67	40				107	1,331	0.08
June	128	76				204	2,537	0.08
July	380	226				606	7,542	0.08
August	1,511	72				1,583	14,326	0.11
September	591	662				1,253	10,343	0.12
October	30	198			1,014	1,242	2,745	0.45
November	19	19			929	967	1,198	0.81
December	278	11			118	407	1,742	0.23
TOTAL	3,244	1,418	0	0	2,061	6,723	45,434	0.15

Catch Area	Month / Day	Number of Boats	Number of Anglers	Number of Chinook	Number of Coho	Number of Chum	Number of Pink	Number of Sockeye	Total Salmon
Area 5									
Total	August 11 - September 7	10,092	26,314	335	23,610	12	13	7	23,977
Note: Estimates in this table are from creel surveys. The creel survey estimates for area 5 were substituted for catch record card estimates.									

Table 25. 1998 Freshwater Salmon Catch - Statistical Months															
System	Catch Area	Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total Fish
COASTAL RIVER SYSTEMS															
COPALIS RIVER	Copolis River	Coho									85	209	17	11	322
		Jack, Unknown									6	11	6		23
		Jack, Chinook											6		6
		Jack, Coho									62	135	23		220
		Total									153	361	46	11	571
GRAYS HARBOR	Chehalis River	Chinook				30	72	19			75	66			262
		Coho								3	19	265			287
		Jack, Unknown									6	11	3		20
		Jack, Chinook					6	6	3	3	11	36			62
		Jack, Coho											180		180
		Total				30	78	25	6	111	558	3			811
GRAYS HARBOR	Humptulips River	Chinook									25	592			617
		Coho										218			218
		Jack, Unknown										11			11
		Jack, Chinook									6	61			67
		Jack, Coho									3	119			122
		Total									34	1,001			1,035
GRAYS HARBOR	Johns River	Chum										3		3	
GRAYS HARBOR	Satsop River	Chinook									14	218	6		238
		Chum									3		3		6
		Coho									11	351	3		365
		Jack, Unknown										17			17
		Jack, Chinook									17	17			34
		Jack, Coho										160	11		171
		Total									45	763	23		831
GRAYS HARBOR	Wishkah River	Coho									3			3	
GRAYS HARBOR	Wynoochee River	Chinook										185			185
		Coho										11			11
		Jack, Chinook										8			8
		Jack, Coho										8			8
		Total										212			212

Table 25. 1998 Freshwater Salmon Catch - Statistical Months (continued)															
System	Catch Area	Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total Fish
COASTAL RIVER SYSTEMS															
HOH RIVER	Hoh River	Chinook					32	63	118	75	39	197	32		556
		Coho							4	16	8	138	47		213
		Jack, Unknown										4			4
		Jack, Chinook						4				4	12		20
		Jack, Coho									4	8	39		51
		Total						32	67	122	95	63	386	79	
JOE CREEK	Joe Creek	Coho										16	23		39
		Jack, Unknown										2	2		4
		Total										18	25		43
QUEETS RIVER	Clearwater River	Chinook										44			44
		Coho										9	3		12
		Total										53	3		56
QUEETS RIVER	Queets River	Chinook									3	245	38		286
		Coho									6	56	23		85
		Jack, Unknown									12	70			82
		Jack, Chinook									9	41			50
		Jack, Coho										202	3		205
		Total										30	614	64	
QUEETS RIVER	Salmon River	Chinook									6	6	6		18
		Chum										3	6		9
		Coho										32	6		38
		Jack, Chinook										3	6		9
		Jack, Coho									6		3		9
		Total										12	44	27	
QUILLAYUTE RIVER	Bogachiel River	Chinook				3						10	17		82
		Coho								10	7	156	163	3	339
		Jack, Chinook							3			7			10
		Jack, Coho										7	31		38
		Total				3			3	10	31	239	180	3	469
QUILLAYUTE RIVER	Calawah River	Coho										21			21
		Total										21			21
QUILLAYUTE RIVER	Dickey River	Coho									3	3	3		9
		Jack, Chinook									3				3
		Total									6	3	3		12

Table 25. 1998 Freshwater Salmon Catch - Statistical Months (continued)																
System	Catch Area	Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total Fish	
COASTAL RIVER SYSTEMS																
QUILLAYUTE RIVER		Chinook				7						66	3		76	
		Coho							3	3	3	368	42		419	
		Jack, Chinook											3			3
		Jack, Coho									3		28	3		34
		Quillayute River Total					7			3	6	3	465	48		532
QUILLAYUTE RIVER		Chinook				21	38	35	17	7	14	136	28		296	
		Chum										3			3	
		Coho							17	45	17	358	184	24	645	
		Sockeye									3	7			10	
		Jack, Unknown							38	7			24	3	72	
		Jack, Chinook										3	10	3	16	
		Jack, Coho									7	31	156	42	236	
		Sol Duc River Total					21	38	35	72	69	72	687	260	24	1,278
WILLAPA BAY		Chinook										22			22	
		Chum										180			180	
		Coho											9		9	
		Bear River Total											211		211	
WILLAPA BAY		Chinook								96	476	236	16		824	
		Chum										109	19		128	
		Pink											3		3	
		Coho										19	40	34	28	121
		Sockeye								12	3				15	
		Jack, Unknown										6			6	
		Jack, Chinook									3	25	16	3	47	
		Jack, Coho											6		6	
Naselle River Total									111	529	410	72	28	1,150		
WILLAPA BAY		Chinook										78			78	
		Chum										267	9		276	
		Coho										37			37	
		Jack, Unknown										6			6	
		Jack, Chinook										9			9	
		Jack, Coho											16		16	
		Nemah River Total											413	9		422
WILLAPA BAY		Chinook										16			16	
		Coho										9	9	12	30	
		Jack, Unknown											3		3	
		Jack, Coho										9	124	3	136	
		North River Total										9	152	12	12	185

Table 25. 1998 Freshwater Salmon Catch - Statistical Months (continued)															
System	Catch Area	Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total Fish
WILLAPA BAY		Chinook									6				6
	Palix River	Total									6				6
WILLAPA BAY		Jack, Unknown										65			65
		Jack, Coho										12			12
	Smith Creek	Total										77			77
WILLAPA BAY		Chinook									127	152	9		288
		Coho	25								9	34	37	165	270
		Jack, Unknown									3	19			22
		Jack, Chinook							3		9	12			24
		Jack, Coho									19	96	3	3	121
	Willapa River	Total	25						3	167	313	49	168		725
		Chinook				31	100	170	154	178	795	2,311	155		3,894
		Chum									3	565	37		605
		Pink										3			3
		Coho	25					24	77	187	2,343	594	243		3,493
		Sockeye								15	10				25
		Jack, Unknown							38	7	37	239	14		335
		Jack, Chinook						10	9	9	94	234	12		368
		Jack, Coho								14	145	1,312	91	3	1,565
COASTAL RIVER SYSTEMS	TOTALS		25			31	100	180	225	300	1,271	7,007	903	246	10,288
COLUMBIA RIVER SYSTEM															
COWLITZ RIVER		Chinook								1	7	4	13	19	44
		Coho	4							2		23	764	353	1,146
		Jack, Chinook						6	4		3		13	4	30
		Jack, Coho									12	332	533	68	945
	Cowlitz River	Total	4					6	4	3	22	359	1,323	444	2,165
COWLITZ RIVER		Chinook											2		2
		Coho										6	76	53	135
		Jack, Coho										70	102		172
	Tilton River	Total										76	180	53	309
GREEN RIVER		Coho								1					1
	Green River	Total								1					1
LEWIS RIVER		Chinook	9		3			177	35	8					232
		Coho		3							23	496	442	19	983
		Jack, Chinook						209	110	4					323
		Jack, Coho	3								378	3,660	13		4,054
	Lewis River	Total	12	3	3			386	145	12	401	4,156	455	19	5,592

Table 25. 1998 Freshwater Salmon Catch - Statistical Months (continued)															
System	Catch Area	Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total Fish
COLUMBIA, LOWER	Kalama River	Chinook									40	67			107
		Coho									66	411	45		522
		Jack, Chinook									13	14			27
		Jack, Coho									45	216	24	8	293
		Total									164	708	69	8	949
COLUMBIA, LOWER	Columbia River, Lower *	Chinook			32					1,072	2,743	27	5		3,879
		Coho									37		45		82
		Jack, Chinook								34	350	1			385
		Jack, Coho	3								493		11	3	510
		Total	3		32					1,106	3,623	28	61	3	4,856
COLUMBIA, LOWER	Washougal River	Chinook			5										5
		Coho												5	5
		Total			5									5	10
COLUMBIA, MID-	Klickitat River	Chinook						14		66	604	374	3	3	1,064
		Coho								3	38	311	91		443
		Jack, Chinook						7		3	76	56	6		148
		Jack, Coho										56			56
		Total						21		72	718	797	100	3	1,711
COLUMBIA, MID-	Little White Salmon River	Chinook								56	140	133			329
		Coho									49	101			150
		Jack, Chinook										20	10		30
		Total								56	209	244			509
COLUMBIA, MID-	Columbia River, Mid-	Chinook							14	346	1,137	374	17		1,888
		Coho								3	164	601	52	7	827
		Jack, Chinook									14	99	11	7	131
		Jack, Coho										51	19		70
		Total							14	363	1,451	1,005	76	7	2,916
COLUMBIA, MID-	White Salmon River	Chinook				28			42	98	175	45			388
		Coho							3	10	147	266	3		429
		Jack, Chinook								3	7	21	3		34
		Jack, Coho										7	24		31
		Total				28			48	115	350	338	3		882
COLUMBIA, MID-	Wind River	Chinook				408	254	23			49	87	10		831
		Coho										105	192		297
		Jack, Chinook										14			14
		Jack, Coho										3	3		6
		Total				408	254	23			49	209	205		1,148
COLUMBIA, UPPER	Icicle River	Chinook							19	68					87
		Total							19	68					87

Table 25. 1998 Freshwater Salmon Catch - Statistical Months (continued)															
System	Catch Area	Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total Fish
COLUMBIA, UPPER		Jack, Chinook								1					1
	Methow River	Total								1					1
COLUMBIA, UPPER		Chinook				30	578	69	30	87	591	3,347	108	8	4,848
		Coho									22	87	14		123
		Sockeye								1					1
		Jack, Chinook					21	4		9	143	666	21		864
	Columbia River, Upper	Total				30	599	73	30	97	756	4,100	143	8	5,836
COLUMBIA, UPPER		Chinook									9	26			35
	Yakima River	Total									9	26			35
		Chinook	9		40	466	851	351	121	1,783	5,533	4,407	148	30	13,739
		Coho	4	3					3	18	651	2,495	1,532	437	5,143
		Sockeye								1					1
		Jack, Chinook					21	226	117	72	739	761	47	4	1,987
		Jack, Coho	6								989	4,380	683	79	6,137
	COLUMBIA RIVER TOTALS	Total	19	3	40	466	872	577	241	1,874	7,912	12,043	2,410	550	27,007
* Does not include some catch just above the Megler Astoria Bridge from August - October. The excluded catch is shown in the Area 1 Ilwaco River catch estimate from August - October.															
PUGET SOUND RIVER SYSTEMS															
CALIFORNIA CREEK		Chinook										2			2
		Coho									2	5	2		9
	California Creek	Total									2	7	2		11
CHAMBERS CREEK		Chinook								7	12				19
		Coho									5	2			7
	Chambers Creek	Total								7	17	2			26
DESCHUTES RIVER		Chinook									112	84			196
		Coho									2	5			7
		Jack, Unknown									2	5			7
		Jack, Chinook									49	16			65
		Jack, Coho									2				2
	Deschutes River - Capitol Lake	Total									167	110			277
DEWATTO CREEK		Coho										16			16
	Dewatto Creek	Total										16			16
DUCKABUSH RIVER		Chum										2	61	16	79
	Duckabush River	Total										2	61	16	79
DUNGENESS RIVER		Coho										326	112	5	443
		Jack, Coho										5			5
	Dungeness River	Total										331	112	5	448

Table 25. 1998 Freshwater Salmon Catch - Statistical Months (continued)																
System	Catch Area	Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total Fish	
ELWHA RIVER	Elwha River	Coho										490	375		865	
		Jack, Unknown												2	2	
		Jack, Coho											37	7		44
		Total											527	384		911
GREEN RIVER	Green - Duwamish River	Chinook									569	492			1,061	
		Chum										4	19	248	77	348
		Coho									12	43	1,220	143	8	1,426
		Jack, Unknown										4	77	4		85
		Jack, Chinook											15	43		58
		Jack, Coho										19	19	860	50	
Total										31	654	2,711	445	85	3,926	
GREEN RIVER	Curley Creek	Chum										8			8	
Total												8			8	
HOKO RIVER	Hoko River	Coho									5				5	
Total											5				5	
KENNEDY CREEK	Kennedy Creek	Chum										202	523	9	734	
		Coho											5			5
		Total											207	523	9	739
LAKE WASHINGTON	Lk Washington - Lk Sammamish	Chinook								2	108	14			124	
		Coho										5	7		12	
		Jack, Chinook											5			5
		Total									2	118	21			141
DAKOTA CREEK	Dakota Creek	Chinook										17			17	
		Coho										47	9		56	
		Jack, Coho											9			9
		Total											73	9		82
MCLANE CREEK	McLane Cr. and Mud Bay	Chum										26		26		
Total												26		26		
MCALLISTER CREEK	McAllister Creek	Unknown								5	93	33			131	
		Chum											2	5	7	
		Jack, Unknown												2	2	
		Jack, Chinook									5	35	5			45
		Total									10	128	42	5		185
NISQUALLY RIVER	Nisqually River	Chinook							6	131	277	9			423	
		Chum	45									5	8	41	407	506
		Coho									5	27	8			40
		Jack, Unknown									27	74				103
		Jack, Chinook								3	321	476	6		2	806
		Jack, Coho									6	13	2			21
		Total	45							9	490	872	33	41	409	1,899

Table 25. 1998 Freshwater Salmon Catch - Statistical Months (continued)																
System	Catch Area	Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total Fish	
NOOKSACK SAMISH	Nooksack River	Chinook									388	345	13		746	
		Chum											13	119	98	230
		Coho									208	1,805	285	13		2,311
		Jack, Unknown											13			13
		Jack, Chinook									158	68				226
		Jack, Coho									94	404	43			541
		Total										848	2,648	460	111	
NOOKSACK SAMISH	Samish River	Chinook								247	2,299	2,917	4		5,467	
		Chum										4	13	4	21	
		Coho								9	68	907	55		1,039	
		Jack, Unknown									4	4			8	
		Jack, Chinook								17	102	34			153	
		Jack, Coho											30		30	
		Total									273	2,473	3,896	72	4	6,718
NOOKSACK SAMISH	Whatcom Creek	Chinook								25	85	196	13		319	
		Chum	13								4	392	3,027	183	3,619	
		Coho									4	68	26		98	
		Jack, Chinook											13		13	
		Total	13								25	93	669	3,066	183	4,049
PURDY CREEK	Purdy Creek	Chum											7	7		
		Total											7	7		
PUYALLUP RIVER	Carbon River	Chinook							8	19	494	62			583	
		Chum										8			8	
		Coho										769	715	31	1,515	
		Jack, Unknown										39	43		82	
		Jack, Chinook										62	12		74	
		Jack, Coho									35	311	260	16	622	
		Total								8	54	1,675	1,100	47		2,884
PUYALLUP RIVER	Puyallup River	Chinook							4	23	39	16			82	
		Chum										8	12	27	47	
		Unknown								4					4	
		Coho								179	882	773	39		1,873	
		Jack, Unknown								12	117	85	4		218	
		Jack, Chinook								12	27	19			58	
		Jack, Coho									486	913	451	4	4	1,858
		Total								4	716	1,978	1,352	59	31	4,140

Table 25. 1998 Freshwater Salmon Catch - Statistical Months (continued)																
System	Catch Area	Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total Fish	
SKAGIT RIVER		Chinook							8	12		12	8		40	
		Chum	8								8	290	1,448	404	2,158	
		Coho									29	37	1,656	428	53	2,203
		Sockeye							20							20
		Jack, Coho										12	33	16		61
		Skagit River	Total	8						28	41	57	1,991	1,900	457	4,482
SKOKOMISH RIVER		Chinook										10			10	
		Chum										208	348		556	
		Coho									10	399	85		494	
		Jack, Chinook										3			3	
		Jack, Coho									5	43	5		53	
		Unknown							3							3
		Skokomish River	Total	3					3			15	663	438		1,119
SNOHOMISH RIVER		Chinook										6	3		9	
		Chum										132	621	135	888	
		Coho									10	525	103	6	644	
		Jack, Unknown										3			3	
		Jack, Coho									3	19	3		25	
		Skykomish River	Total									13	685	730	141	1,569
SNOHOMISH RIVER		Chinook										13	13		26	
		Chum										196	338	77	611	
		Coho								3		2,022	135	6	2,166	
		Jack, Unknown										13			13	
		Jack, Chinook									3				3	
		Jack, Coho										90			90	
		Snohomish River	Total								3	3	2,334	486	83	2,909
		SNOHOMISH RIVER		Chinook										6		
Chum													3	39	42	
Coho										19		328	45	6	398	
Jack, Coho												16	6	3	25	
Snoqualmie River	Total										19		350	54	48	471
SNOHOMISH RIVER		Chum									38	77	3	118		
Stillaguamish River	Total										38	77	3	118		
SNOHOMISH RIVER		Coho									2	5		7		
Tolt River	Total										2	5		7		
TAHUYA RIVER		Coho									45			45		
Tahuya River	Total										45			45		
UNION RIVER		Coho									5			5		
Union River	Total										5			5		

Table 25. 1998 Freshwater Salmon Catch - Statistical Months (continued)																
System	Catch Area	Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total Fish	
		Chinook							26	466	4,383	4,201	54		9,130	
		Chum	66								21	1,530	6,917	1,479	10,013	
		Coho								256	2,077	11,381	1,878	97	15,689	
		Sockeye							20						20	
		Unknown							3	9	93	33			138	
		Jack, Unknown								39	240	245	10	2	536	
		Jack, Chinook							3	355	932	219			1,509	
		Jack, Coho								546	1,372	2,259	150	7	4,334	
	PUGET SOUND RIVER SYSTEMS	TOTALS	66						52	1,671	9,118	19,868	9,009	1,585	41,369	
		Chinook	9		40	497	951	521	301	2,427	10,711	10,913	357	30	26,757	
		Chum	66								24	2,095	6,954	1,479	10,618	
		Pink										3			3	
		Coho	29	3					27	351	2,915	16,219	4,004	777	24,325	
		Sockeye							20	16	10				46	
		Unknown							3	9	93	33			138	
		Jack, Unknown								38	46	277	484	24	2	871
		Jack, Chinook						21	236	129	436	1,765	1,214	59	4	3,864
		Jack, Coho	6								560	2,506	7,960	924	89	12,045
	STATEWIDE TOTALS (1998)	TOTALS	110	3	40	497	972	757	518	3,845	18,301	38,921	12,322	2,381	78,667	

Table 26. 1998 Washington Sport Salmon Fishing, by Residence

County of Residence	# Catch Record Cards	Population by County	% Catch Record Card Holders	Total Freshwater Salmon Catch	Total Marine Salmon Catch	Total Salmon	Average Catch per Catch Record Card
Adams	317	15,900	1.99	0	336	336	1.06
Asotin	158	20,000	.79	0	0	0	0.00
Benton	4,654	137,500	3.38	2,670	671	3,341	.72
Chelan	1,297	62,600	2.07	470	212	682	.53
Clallam	7,276	66,700	10.91	865	6,911	7,776	1.07
Clark	18,010	328,000	5.49	5,584	2,793	8,377	.47
Columbia	43	4,200	1.02	0	35	35	.81
Cowlitz	9,106	93,100	9.78	3,290	1,379	4,669	.51
Douglas	576	31,400	1.83	94	230	324	.56
Ferry	43	7,300	.59	0	0	0	0.0
Franklin	1,441	44,400	3.25	978	71	1,049	.73
Grant	1,023	69,400	1.47	19	371	390	.38
Grays Harbor	7,463	67,900	10.99	1,692	2,810	4,502	.60
Island	5,821	72,500	8.03	1,034	6,310	7,344	1.26
Jefferson	3,069	26,500	11.58	395	3,129	3,524	1.15
King	48,757	1,665,800	2.93	9,325	33,089	42,414	.87
Kitsap	14,610	229,000	6.38	508	12,868	13,376	.92
Kittitas	519	31,400	1.65	56	177	233	.45
Klickitat	1,369	19,100	7.17	996	88	1,084	.79
Lewis	4,322	68,600	6.30	1,542	1,555	3,097	.72
Lincoln	115	10,000	1.15	132	53	185	1.61
Mason	3,616	48,300	7.49	301	3,040	3,341	.92
Okanogan	303	38,400	.79	38	18	56	.18
Pacific	3,098	21,500	14.41	1,880	866	2,746	.89
Pend Oreille	29	11,200	.26	0	71	71	2.45
Pierce	29,320	686,800	4.27	6,187	21,670	27,857	.95
San Juan	1,066	12,600	8.46	0	707	707	.66
Skagit	8,746	98,700	8.86	4,907	3,376	8,283	.95
Skamania	317	9,900	3.20	38	0	38	.12
Snohomish	27,159	568,100	4.78	5,997	22,448	28,445	1.05
Spokane	2,781	410,900	.68	1,805	1,308	3,113	1.12
Stevens	231	37,600	.61	0	71	71	.31
Thurston	10,662	199,700	5.34	3,478	5,851	9,329	.88
Wahkiakum	490	3,900	12.56	188	0	188	.38
Walla Walla	807	54,600	1.48	320	177	497	.62
Whatcom	8,126	157,500	5.16	10,378	3,270	13,648	1.68
Whitman	202	41,400	.49	75	18	93	.46
Yakima	6,700	210,500	3.18	3,159	1,485	4,644	.69
Unknown WA	158	n/a	n/a	0	124	124	.79
Washington Total	233,800	5,682,900	4.11	68,401	137,589	205,989	.88
Other State Total	24,393	n/a	n/a	2,501	7,760	10,261	.42
Canada	562	n/a	n/a	38	460	498	.89
Unknown	6,527	n/a	n/a	7,727	10,994	18,721	2.87
Foreign	14	n/a	n/a	0	0	0	n/a
Grand Total	265,296	5,682,900	n/a	78,667	156,802	235,469	.89

Table 27. 1998 Frequency Distribution of Estimated Salmon Catch Record Cards and Catch

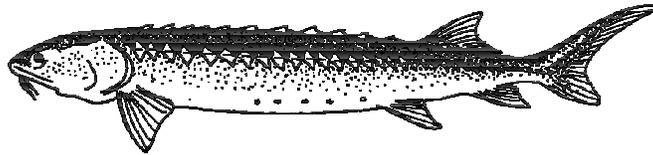
# Salmon per Catch Record Card	# of Cards	Cumulative # of Cards	Percent Cards	Cumulative Percent Cards	Total Catch	Cumulative Total Catch	Percent Catch	Cumulative Percent Catch
0	188,615	188,615	71.10	71.10	0	0	0	0
1	23,034	211,649	8.68	79.78	18,205	18,205	7.73	7.73
2	17,151	228,800	6.47	86.24	27,111	45,316	11.51	19.25
3	7,535	236,335	2.84	89.08	17,865	63,181	7.59	26.83
4	7,829	244,164	2.95	92.03	24,750	87,931	10.51	37.34
5	4,209	248,373	1.59	93.62	16,631	104,562	7.06	44.41
6	3,552	251,925	1.34	94.96	16,846	121,408	7.15	51.56
7	2,285	254,210	0.86	95.82	12,643	134,051	5.37	56.93
8	2,217	256,427	0.84	96.66	14,020	148,071	5.95	62.89
9	1,561	257,988	0.59	97.25	11,105	159,176	4.72	67.60
10	1,041	259,029	0.39	97.64	8,226	167,402	3.49	71.09
11	815	259,844	0.31	97.94	7,082	174,484	3.01	74.10
12	996	260,840	0.38	98.32	9,442	183,926	4.01	78.11
13	520	261,360	0.20	98.52	5,347	189,273	2.27	80.38
14	792	262,152	0.30	98.81	8,763	198,036	3.72	84.10
15	3,009	265,161	1.13	99.95	35,677	233,713	15.15	99.26
16	91	265,252	0.03	99.98	1,145	234,858	.49	99.74
17	45	265,297	0.02	100.00	608	235,466	.26	100.00
Total	265,297		100.00		235,466		100.00	

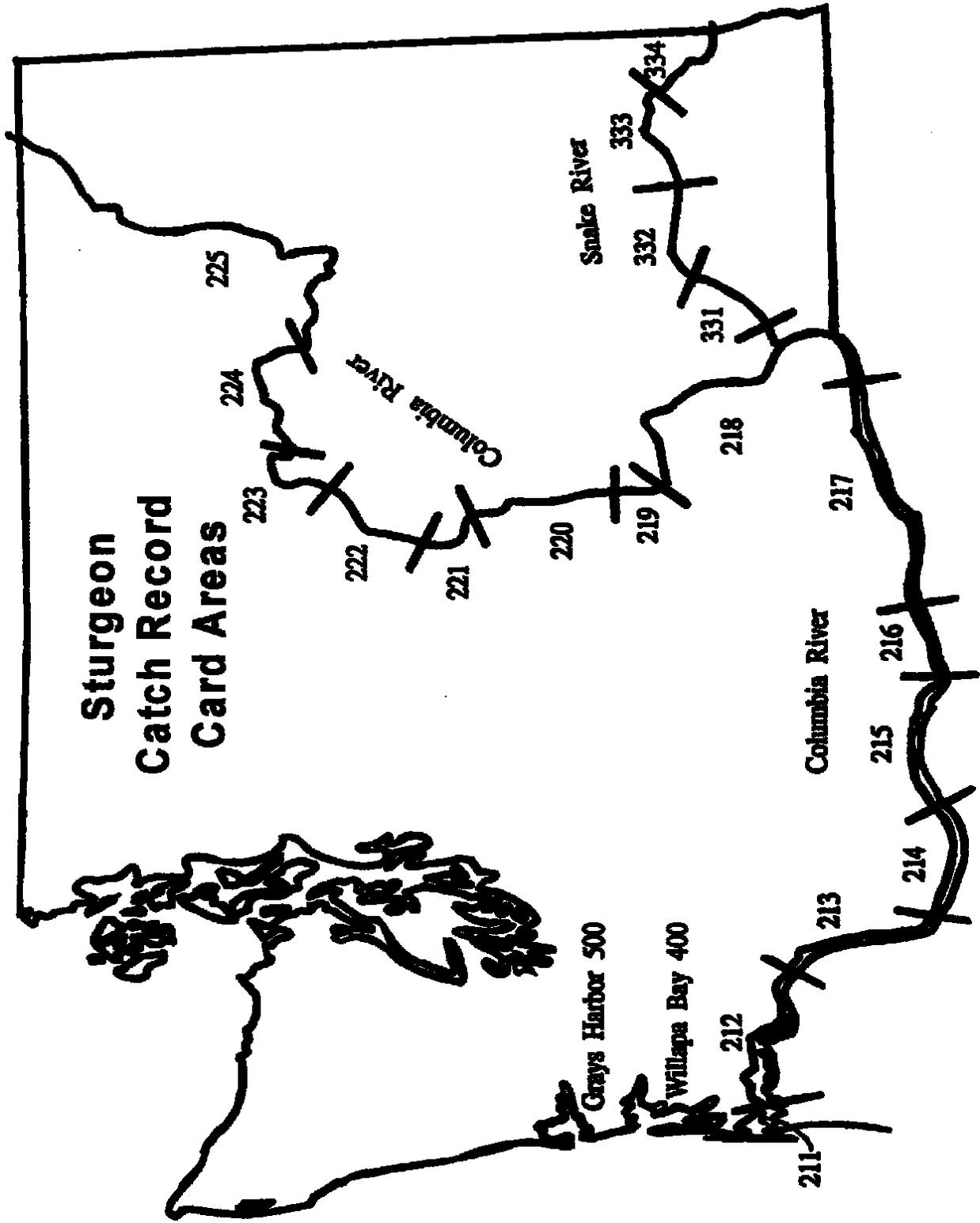
Note: The figures do not accurately multiply across because of bias adjustment factor and rounding of numbers.

Table 28A. 1998 Sport Salmon Technical Catch Data	
Records on File	Estimates and Calculations
Name and Address File	18,924
Catch Record Cards in Sample Returns	11,725
Correction Data	
Correction Factor Percentage of voluntarily returned catch records with matching names and addresses	$3,609 / 3,987 = 0.905$
Name/Address Corrected for Dealer Non-Response	$18,924 / 0.905 = 20,910$
Estimated Number of Catch Records Issued (Num Books x Avg # CRC/Book)	$11,098 \times 23.90485133 = 265,296$
Catch Expansion Factor	$265,296 / 11,725 = 22.63$

Table 28B. 1998 Sport Salmon Inventory of Catch Record Cards Received											
Response Code*	Number of Cards with Catch		Number of Cards without Catch		Total Cards	Number of Salmon			Catch Per Card		
	Catch Records	Reminder Letters	Catch Records	Reminder Letters		Catch Records	Reminder Letters	Total Salmon	Catch Records	Reminder Letters	Total Salmon
1	159	0	130	0	289	225	0	225	.78	0	.78
2	161	339	214	1,664	2,378	215	436	651	.57	.22	.27
4	63	89	51	547	750	84	114	198	.74	.18	.26
6	1,360	729	1,644	3,499	7,232	1,736	931	2,667	.58	.22	.37
7	470	0	586	0	1,056	622	0	622	.59	0	.59
8	19	0	1	0	20	0	0	0	0.00	0	.00
Total	2,232	1,157	2,626	5,710	11,725	2,882	1,481	4,363	.59	.22	.37
<p>*Response Codes</p> <ul style="list-style-type: none"> 1 Prior to any reminder sent 2 After second reminder 4 After third reminder 6 After first reminder 7 From sporting goods dealer 8 Return date unknown 											

Sturgeon





Description of Sturgeon Catch Record Card Areas

Columbia River

- 211 Buoy 10 to Astoria Bridge
- 212 Astoria Bridge to Longview Bridge
- 213 Longview Bridge to I-5 Bridge
- 214 I-5 Bridge to Bonneville Pool
- 215 Bonneville Pool to the Dalles Pool
- 216 The Dalles Pool to John Day Pool
- 217 John Day Pool to McNary Pool
- 218 McNary Pool to Priest Rapids Pool
- 219 Priest Rapids Pool to Wanapum Pool
- 220 Wanapum Pool to Rock Island Pool
- 221 Rock Island Pool to Rocky Reach Pool
- 222 Rocky Reach Pool to Wells Pool
- 223 Wells Pool to Chief Joseph Pool
- 224 Chief Joseph Pool to Grand Coulee Pool
- 225 Grand Coulee Pool to Canadian Border

Snake River

- 331 Ice Harbor Pool to Lower Monumental Pool
- 332 Lower Monumental Pool to Little Goose Pool
- 333 Little Goose Pool to Lower Granite Pool
- 334 Lower Granite Pool to Idaho Border

Other

- 400 Willapa Bay
- 500 Grays Harbor
- 299 Unknown Area (Statewide)

Table 29. 1998 Sport Sturgeon Catch, by Area and Month														
Catch Area	Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total Fish
COLUMBIA RIVER SYSTEM														
Buoy 10 to	Green						2	8	10	6				26
	White		20	33	210	1,170	3,033	2,697	1,226	602	70			9,061
Astoria Bridge*	Total		20	33	210	1,170	3,035	2,705	1,236	608	70			9,087
Astoria Bridge to	Green						2	8	9	5				24
	White	24	149	80	397	1,253	3,054	2,747	1,254	630	140	36	20	9,784
Longview Bridge*	Total	24	149	80	397	1,253	3,056	2,755	1,263	635	140	36	20	9,808
Longview Bridge to	White	397	194	422	154	69	10	58		39	95	114	105	1,657
I-5 Bridge*	Total	397	194	422	154	69	10	58		39	95	114	105	1,657
I-5 Bridge to	White	4	66	236	84	155	74	115	12	163	70	76	30	1,085
Bonneville Dam*	Total	4	66	236	84	155	74	115	12	163	70	76	30	1,085
Bonneville Dam to	White	124	112	231	186	12		12	4	8				689
The Dalles Dam	Total	124	112	231	186	12		12	4	8				689
The Dalles Dam to	White	12	33	99	202	103	99							548
John Day Dam	Total	12	33	99	202	103	99							548
John Day Dam to	Unknown											4		4
	White	4	4	8	37	17	33	25	29	41	33			231
McNary Dam	Total	4	4	8	37	17	33	25	29	41	33	4		235
McNary Dam to	White		4	4	8	21	29	83	58	17	12	4		240
Priest Rapids Dam	Total		4	4	8	21	29	83	58	17	12	4		240
Priest Rapids Dam to	White								4	4	8			16
Wanapum Dam	Total								4	4	8			16
Wanapum Dam to	White									4				4
Rock Island Dam	Total									4				4
Rock Island Dam to	White								4					4
Rocky Reach Dam	Total								4					4
Chief Joseph Dam to	White			4		8	4	4		8				28
Grand Coulee Dam	Total			4		8	4	4		8				28
Grand Coulee Dam to	White						4							4
Canadian border	Total						4							4
	Unknown											4		4
	White	565	582	1,117	1,278	2,808	6,340	5,741	2,587	1,512	428	238	155	23,351
	Green						4	16	19	11				50
COLUMBIA RIVER SYSTEM	Total	565	582	1,117	1,278	2,808	6,344	5,757	2,606	1,523	428	242	155	23,405

Table 29. 1998 Sport Sturgeon Catch, by Area and Month (continued)

Catch Area	Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total Fish
SNAKE RIVER SYSTEM														
Ice Harbor Dam to	White		4			17	4	12	8	21	8			74
Lower Monumental Dam	Total		4			17	4	12	8	21	8			74
Lower Monumental Dam to	White			8		12	21	8	21	12	8			90
Little Goose Dam	Total			8		12	21	8	21	12	8			90
Little Goose Dam to	White	4			21	37	45	29	8	8				152
Lower Granite Dam	Total	4			21	37	45	29	8	8				152
Lower Granite Dam to	White							4						4
Idaho Border	Total							4						4
	White	4	4	8	21	66	70	53	37	41	16	0	0	320
SNAKE RIVER SYSTEM	Total	4	4	8	21	66	70	53	37	41	16	0	0	320
GRAYS HARBOR SYSTEM														
	White	25	50	78	54	58	37	78	83	58	70	50	29	670
	Green			8	4	4		8		4				28
	Unknown			4		8			4	8				24
Grays Harbor System	Total	25	50	90	58	70	37	86	87	70	70	50	29	722
WILLAPA BAY SYSTEM														
	White	219	149	306	78	74	37	62	29	29	21	62	83	1,149
	Green								8		4			12
	Unknown		4	8										12
Willapa Bay System	Total	219	153	314	78	74	37	62	37	29	25	62	83	1,173
TOTAL FOR CATCH AREAS REPORTED														
	White	817	789	1,517	1,452	3,072	6,554	5,987	2,773	1,681	551	350	267	25,810
	Green			8	4	4	4	24	27	15	4			90
	Unknown		4	12		8			4	8		4		40
STATEWIDE CATCH AREAS	Total	817	793	1,537	1,456	3,084	6,558	6,011	2,804	1,704	555	354	267	25,940

* Estimates are from creel surveys - all other estimates are from catch record cards.

Table 30. 1998 Washington Sport Sturgeon Fishing, by Residence

County of Residence	# Catch Record Cards	Population by County	% Catch Record Card Holders	Total Sturgeon	Average Catch per Catch Record Card
Adams	401	15,900	2.52	109	0.27
Asotin	163	20,000	0.82	28	0.17
Benton	3,792	137,500	2.76	326	0.09
Chelan	267	62,600	0.43	44	0.16
Clallum	260	66,700	0.39	117	0.45
Clark	18,060	328,000	5.51	5,878	0.33
Columbia	78	4,200	1.86	8	0.10
Cowlitz	9,337	93,100	10.03	3,831	0.41
Douglas	178	31,400	0.57	8	0.04
Ferry	14	7,300	0.19	0	0.00
Franklin	1,308	44,400	2.95	185	0.14
Garfield	5	2,400	0.21	0	0.00
Grant	605	69,400	0.87	121	0.20
Grays Harbor	3,734	67,900	5.50	627	0.17
Island	48	72,500	0.07	16	0.33
Jefferson	81	26,500	0.31	32	0.40
King	4,415	1,665,800	0.27	1,689	0.38
Kitsap	1,011	229,000	0.44	293	0.29
Kittitas	117	31,400	0.37	40	0.34
Klickitat	852	19,100	4.46	366	0.43
Lewis	3,154	68,600	4.60	712	0.23
Lincoln	51	10,000	0.51	12	0.24
Mason	884	48,300	1.83	402	0.45
Okanogan	39	38,400	0.10	8	0.21
Pacific	2,947	21,500	13.71	2,388	0.81
Pend Oreille	35	11,200	0.31	0	0.00
Pierce	3,474	686,800	0.51	1,303	0.38
San Juan	18	12,600	0.14	0	0.00
Skagit	242	98,700	0.25	48	0.20
Skamania	336	9,900	3.39	141	0.42
Snohomish	1,664	568,100	0.29	531	0.32
Spokane	1,342	410,900	0.33	342	0.25
Stevens	113	37,600	0.30	8	0.07
Thurston	3,046	199,700	1.53	885	0.29
Wahkiakum	559	3,900	14.33	322	0.58
Walla Walla	757	54,600	1.39	137	0.18
Whatcom	193	157,500	0.12	36	0.19
Whitman	131	41,400	0.32	101	0.77
Yakima	4,158	210,500	1.98	683	0.16
Unknown WA	67	n/a	0.06	4	0.06
Washington Total	67,936	5,685,300	1.20	21,781	0.32
Other State Total	9,165	n/a	0.43	3,920	0.43
Canada	44	n/a	0.36	16	0.36
Unknown	2,120	n/a	0.11	225	0.11
Foreign	n/a	n/a	n/a	0	0.00
Grand Total	79,265	5,685,300	1.39	25,942	0.33

Note: The figures do not accurately multiply across because of bias adjustment factor and rounding of numbers.

Table 31. 1998 Frequency Distribution of Estimated Sturgeon Catch Record Cards and Catch

#Sturgeon per Catch Record Card	# of Cards	Cumulative # of Cards	Percent Cards	Cumulative Percent Cards	Total Catch	Cumulative Total Catch	Percent Catch	Cumulative Percent Catch
0	63,604	63,604	80.24	80.24	0	0	0.00	0
1	9,802	73,406	12.37	92.61	8,688	8,688	33.49	33.49
2	2,726	76,132	3.44	96.05	4,832	13,520	18.63	52.12
3	1,287	77,419	1.62	97.67	3,422	16,942	13.19	65.31
4	711	78,130	0.90	98.57	2,522	19,464	9.72	75.04
5	407	78,537	0.51	99.08	1,804	21,268	6.96	81.99
6	292	78,829	0.37	99.45	1,552	22,820	5.98	87.97
7	185	79,014	0.23	99.68	1,148	23,968	4.4	92.40
8	99	79,113	0.12	99.81	700	24,668	2.70	95.10
9	86	79,199	0.11	99.92	689	25,357	2.66	97.75
10	66	79,265	0.08	100.00	583	25,940	2.25	100.00
TOTAL	79,265		100.00		25,940		100.00	

Table 32A. 1998-99 Sturgeon Technical Catch Data	
Records on File	Estimates and Calculations
Name and Address File	34,288
Catch Record Cards in Sample Returns	19,186
Correction Data	
Correction Factor Percentage of voluntarily returned catch records with matching names and addresses	1,317 / 1,523 = .865
Name/Address Corrected for Dealer Non-Response	34,288 / .865 = 39,639
Estimated Number of Catch Records Issued	39,639 x 2 = 79,264
Catch Expansion Factor	79,264 / 19,186 = 4.13

Table 32B. 1998 Sport Sturgeon Inventory of Catch Record Cards Received											
Response Code*	Number of Cards with Catch		Number of Cards without Catch		Total Cards	Number of Sturgeon			Catch Per Card		
	Catch Records	Reminder Letters	Catch Records	Reminder Letters		Catch Records	Reminder Letters	Total Sturgeon	Catch Records	Reminder Letters	Total
1	750	0	1546	0	2296	1611	0	1611	.70	0	.70
2	560	1049	999	7673	10281	1105	1699	2804	.71	.20	.27
4	107	429	266	2537	3339	184	679	863	.49	.23	.26
7	890	0	2380	0	3270	1840	0	1840	.56	0	.56
Total	2,307	1,478	5,191	10,210	19,186	4,740	2,378	7,118	.63	.20	.37
<p>*Response Codes</p> <p>1 Prior to any reminder sent</p> <p>2 After first reminder</p> <p>4 After second reminder</p> <p>7 From sporting goods dealer</p>											

Steelhead

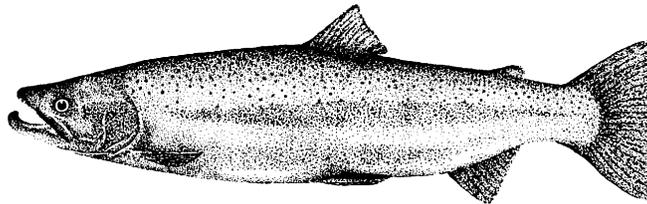


Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)																	
COLUMBIA RIVER AND TRIBUTARIES ¹																	
System	Catch Area	Race	Marked/ Unmarked	1998						1999						Total	
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr ⁴		
COWLITZ RIVER SYSTEM (continued)	Cowlitz, Mayfield to Cowlitz Falls Dams (continued)	WSH	Marked							0						0	
			Unmarked							3						3	
			Total							3						3	
	Green River	SSH	Marked		47	35				18							100
			Unmarked		3	6				3							12
			Total		50	41				21							112
		WSH	Marked							13						42	
			Unmarked							0						0	
			Total							13						42	
	Lacamas Creek	SSH	Marked													3	
			Unmarked													0	
			Total													3	
	Tilton River	WSH	Marked							26						186	
			Unmarked							3						23	
Total									29						209		
Toutle River	SSH	Marked													0		
		Unmarked													6		
		Total													6		
Toutle River, South Fork	SSH	Marked		41	50	3			44							138	
		Unmarked		0	6	0			0							6	
		Total		41	56	3			44							144	
	WSH	Marked							10						10		
		Unmarked							0						3		
		Total							10						13		
Cowlitz River System	SSH	Marked	32	152	752	1280	586	314							3,116		
		Unmarked	6	9	36	47	56	27							181		
		Total	38	161	788	1327	642	341							3,297		
	WSH	Marked							282						2,211		
		Unmarked							0						115		
		Total							282						2,326		
ELOCHOMAN RIVER SYSTEM	SSH	Marked													89		
		Unmarked													0		
		Total													89		
	WSH	Marked							24						645		
		Unmarked							3						9		
		Total							27						654		

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)																		
COLUMBIA RIVER AND TRIBUTARIES ¹																		
System	Catch Area	Race	Marked/ Unmarked	1998						1999						Total		
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr ⁴			
GERMANY CREEK SYSTEM	Germany Creek	SSH	Marked	4												4		
			Unmarked	0												0		
			Total	4												4		
		WSH	Marked							5 0 5 5						15		
			Unmarked							0 5 0 0						5		
			Total							5 5 5 5						20		
GRADE CREEK SYSTEM	Grade Creek	SSH	Marked													11		
			Unmarked													0		
			Total													11		
GRANDE RONDE SYSTEM	Grande Ronde River	SSH	Marked	3		3		199		157 139		133 175		504 127		1,440		
			Unmarked	0		0		9		21 0		0 0		0 0		30		
			Total	3		3		208		178 139		133 175		504 127		1,470		
GRAYS RIVER SYSTEM	Grays River and West Fork	SSH	Marked							8						8		
			Unmarked							0						0		
			Total							8						8		
		WSH	Marked							7 120 13 13						153		
			Unmarked							0 0 0 0						0		
			Total							7 120 13 13						153		
HAMILTON CREEK SYSTEM	Hamilton Creek	WSH	Marked							21						21		
			Unmarked							0						0		
			Total							21						21		
KALAMA RIVER SYSTEM	Kalama River	SSH	Marked			8		3								11		
			Unmarked			0		0								0		
			Total			8		3								11		
	Kalama River above Kalama Falls Hatchery	SSH	Marked			5		3		3								11
			Unmarked			0		0		0								0
			Total			5		3		3								11
	Kalama River below Kalama Falls Hatchery	SSH	Marked	37	135	77	50	24	18							341		
			Unmarked	8	0	5	0	5	8							26		
			Total	45	135	82	50	29	26							367		
		WSH	Marked							7 135 59 8 11 16						236		
			Unmarked							3 5 3 0 5 6						22		
			Total							10 140 62 8 16 22						258		

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)																	
COLUMBIA RIVER AND TRIBUTARIES ¹																	
System	Catch Area	Race	Marked/ Unmarked	1998						1999						Total	
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr ⁴		
KALAMA RIVER SYSTEM (continued)	Kalama River System	SSH	Marked	37	135	82	61	27	21							363	
			Unmarked	8	0	5	0	5	8							26	
			Total	45	135	87	61	32	29							389	
		WSH	Marked									7	135	59	8	11	16
Unmarked										3	5	3	0	5	6	22	
Total										10	140	62	8	16	22	258	
KLICKITAT RIVER SYSTEM	Klickitat River	SSH	Marked		37	17	140	133	218	99		3			3	650	
			Unmarked		0	0	3	3	3		3		0			0	12
			Total		37	17	143	136	221	102		3				3	662
LEWIS RIVER SYSTEM	Cedar Creek	SSH	Marked	3												11	
			Unmarked	0												0	
			Total	3												11	
		WSH	Marked									4		18			22
	Unmarked										0		0			0	
	Total										4		18			22	
	Lewis River	SSH	Marked	8	50	121	146	118	14								457
			Unmarked	0	5	3	5	3	0								16
			Total	8	55	124	151	121	14								473
		WSH	Marked									11	21	4		4	4
	Unmarked										0	4	10		3	0	17
	Total										11	25	14		7	4	61
Lewis River, East Fork	SSH	Marked	85	94	61	22	6	58								326	
		Unmarked	0	0	0	0	0	5								5	
		Total	85	94	61	22	6	63								331	
	WSH	Marked									11	135	287	46	36	39	554
Unmarked										0	4	11	0	0	4	19	
Total										11	139	298	46	36	43	573	
Lewis River, North Fork	SSH	Marked	11	30	110	83	41	36								311	
		Unmarked	0	0	8	11	3	0								22	
		Total	11	30	118	94	44	36								333	
	WSH	Marked									28	85	46	14	7	14	194
Unmarked										0	4	0	0	0	0	4	
Total										28	89	46	14	7	14	198	

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)																	
COLUMBIA RIVER AND TRIBUTARIES ¹																	
System	Catch Area	Race	Marked/ Unmarked	1998						1999						Total	
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr ⁴		
LEWIS RIVER SYSTEM (continued)	Lewis River System	SSH	Marked	107	174	292	251	165	116							1,105	
			Unmarked	0	5	11	16	6	5							43	
	Total	107	179	303	267	171	121								1,148		
	WSH	Marked									54	241	355	60	47	57	814
Unmarked										0	12	21	0	3	4	40	
			Total							54	253	376	60	50	61	854	
LITTLE WHITE SALMON RIVER SYSTEM	Drano Lake	SSH	Marked				3									3	
			Unmarked				0									0	
				Total				3								3	
	Little White Salmon River	SSH	Marked			138	1,035	1,573	162		10	3	7				2,928
			Unmarked			7	13	10	0		0	0	0				30
				Total			145	1,048	1,583	162	10	3	7				2,958
Little White Salmon River System	SSH	Marked			138	1,038	1,573	162		10	3	7				2,931	
		Unmarked			7	13	10	0		0	0	0				30	
			Total			145	1,051	1,583	162	10	3	7				2,961	
MILL CREEK SYSTEM	Mill Creek	SSH	Marked													4	
			Unmarked													0	
			Total													4	
SALMON CREEK SYSTEM	Salmon Creek (Clark Co.)	WSH	Marked							7	64	71	11			153	
			Unmarked								0	0	0	0		0	
			Total								7	64	71	11			153
SKAMOKAWA CREEK SYSTEM	Skamokawa Creek	WSH	Marked							26	10	10	0			46	
			Unmarked								0	16	0	5		21	
			Total								26	26	10	5			67
SNAKE RIVER MAINSTEM SYSTEM	Below Ice Harbor Dam	SSH	Marked							18	22	4				44	
			Unmarked							0	4	0				4	
				Total						18	26	4				48	
	Ice Harbor Dam to Lower Monumental Dam	SSH	Marked					15	158		340	373	15	26	7		934
			Unmarked					0	4		11	4	0	0	0		19
				Total				15	162		351	377	15	26	7		953
Lwr Monumental Dam to Little Goose Dam	SSH	Marked						77	779	513	225	173	177	63		2,007	
		Unmarked					4	19		11	0	19	15	0		68	
			Total					81	798	524	225	192	192	63		2,075	
Little Goose Dam to Lower Granite Dam	SSH	Marked						4	110	166	103	44	74	18		519	
		Unmarked					0	4		4	0	0	4	0		12	
			Total					4	114	170	103	44	78	18		531	

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)																
COLUMBIA RIVER AND TRIBUTARIES ¹																
System	Catch Area	Race	Marked/ Unmarked	1998						1999						Total
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr ⁴	
SNAKE RIVER SYSTEM (continued)	Lower Granite Dam to Clarkston	SSH	Marked					37	543	524	110	70	48	26	1,358	
			Unmarked				0	22	11	4	4	0	0	41		
			Total				37	565	535	114	74	48	26	1,399		
	Snake River above Clarkston	SSH	Marked			7		7	1,116	1,082	295	88	19		2,614	
Unmarked					0		0	18	11	0	4	7		40		
Total					7		7	1,134	1,093	295	92	26		2,654		
Snake River above Lower Granite Dam	SSH	Marked									4			4		
		Unmarked									0			0		
		Total									4			4		
Snake River System	SSH	Marked			7		140	2,706	2,643	1,128	398	344	114	7,480		
		Unmarked			0		4	67	48	12	27	26	0	184		
		Total			7		144	2,773	2,691	1,140	425	370	114	7,664		
TUCANNON RIVER SYSTEM	Tucannon River	SSH	Marked				0	0	74	29	44	42	38	19	246	
			Unmarked				3	3	15	13	10	0	0	0	44	
			Total				3	3	89	42	54	42	38	19	290	
WALLA WALLA RIVER SYSTEM	Mill Creek (Walla Walla Co.)	SSH	Marked						3			10		3	16	
			Unmarked						0			0		0	0	
			Total						3			10		3	16	
	Touchet River & North Fork	SSH	Marked							3			3	16	16	13
Unmarked									0			0	0	0	0	0
Total									3			3	16	16	13	151
Walla Walla River	SSH	Marked							81	73	29	57	26	16	282	
		Unmarked							0	0	0	0	0	0	0	
		Total							81	73	29	57	26	16	282	
Walla Walla River System	SSH	Marked							87	73	29	70	42	35	13	349
		Unmarked							0	0	0	0	0	0	0	0
		Total							87	73	29	70	42	35	13	349
WASHOUGAL RIVER SYSTEM	Washougal River	SSH	Marked	6	19	8	2	2							37	
			Unmarked	0	0	0	0	0							0	
			Total	6	19	8	2	2							37	
	Washougal River, West Fork	SSH	Marked			2	5	2	3	2						14
Unmarked					0	0	0	0	0						0	
Total					2	5	2	3	2						14	
Washougal River, West Fork	WSH	Marked							2	16	47	17	6	8	96	
		Unmarked							0	0	0	2	0	0	2	
		Total							2	16	47	19	6	8	98	
Washougal River, West Fork	WSH	Marked									6				8	
		Unmarked									0				0	
		Total									6				8	

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)																	
COLUMBIA RIVER AND TRIBUTARIES ¹																	
System	Catch Area	Race	Marked/ Unmarked	1998						1999						Total	
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr ⁴		
WASHOUGAL RIVER SYSTEM (continued)	Washougal River, Little	SSH	Marked			5	5	2	3							15	
			Unmarked			0	0	0	0							0	
			Total			5	5	2	3							15	
		WSH		Marked									4	2			6
				Unmarked									0	0			0
				Total									4	2			6
	Washougal River System	SSH		Marked	6	21	18	9	7	5							66
				Unmarked	0	0	0	0	0	0							0
WSH			Marked								4	16	57	19	6	8	110
			Unmarked								0	0	0	2	0	0	2
		Total	6	21	18	9	7	5		4	16	57	21	6	8	112	
WENATCHEE RIVER SYSTEM	Wenatchee River	SSH	Marked			4						4			4	12	
			Unmarked			0						0			4	4	
			Total			4						4			8	16	
WHITE SALMON RIVER SYSTEM	Big White Salmon River	SSH	Marked	6		100	356	514	79		15	26	3	3	3	1,105	
			Unmarked	0		0	9	9	0		0	0	0	0	0	18	
			Total	6		100	365	523	79		15	26	3	3	3	1,123	
WIND RIVER SYSTEM	Wind River	SSH	Marked						5							5	
			Unmarked						0							0	
			Total						5							5	
	Wind River above Shipherd Falls	SSH		Marked		5	5	5				5					20
				Unmarked		0	0	0				0					0
				Total		5	5	5				5					20
	Wind River below Shipherd Falls	SSH		Marked		5	16	317	273	39							650
				Unmarked		0	0	27	33	5							65
Total					5	16	344	306	44							715	
Wind River System	SSH		Marked		10	21	322	278	39		5					675	
			Unmarked		0	0	27	33	5		0					65	
			Total		10	21	349	311	44		5					740	
YAKIMA RIVER SYSTEM	Bumping River	SSH	Marked					4			4					8	
			Unmarked					0			0					0	
			Total					4			4					8	
	Tieton River	SSH		Marked										4			4
				Unmarked										0			0
				Total										4			4
Yakima River System	SSH		Marked					4			4			4		12	
			Unmarked					0			0		0			0	
			Total					4			4		4			12	

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)																	
COLUMBIA RIVER AND TRIBUTARIES ¹																	
System	Catch Area	Race	Marked/ Unmarked	1998						1999						Total	
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr ²		
COLUMBIA RIVER AND TRIBUTARY SYSTEMS TOTALS	SSH	Marked	507	1,867	2,740	5,308	4,185	4,798	3,883	1,627	795	673	698	146	27,227		
		Unmarked	20	28	74	159	159	154	96	43	30	29	4	0	796		
		Total	527	1,895	2,814	5,467	4,344	4,952	3,979	1,670	825	702	702	146	28,023		
	WSH	Marked							407	1,765	1,550	337	235	174	4,468		
		Unmarked							6	74	82	10	18	27	217		
		Total							413	1,839	1,632	347	253	201	4,685		
COAST RIVERS AND MARINE CATCH AREAS																	
CEDAR CREEK SYSTEM*	Cedar Creek	SSH	Marked												2	2	
			Unmarked												0	0	
			Total													2	2
CHEHALIS RIVER SYSTEM*	Chehalis River above Black River	SSH	Marked			2			2	0						4	
			Unmarked			0			0	2						2	
			Total			2			2	2						6	
		WSH	Marked									2	7	10	12	5	36
			Unmarked									0	0	0	0	0	0
			Total									2	7	10	12	5	36
	Chehalis River below Black River	SSH	Marked				2		2							4	
			Unmarked				0		0							0	
		WSH	Marked									7	2	45	32	40	126
			Unmarked									0	0	0	5	42	47
			Total				2		2		7	2	45	37	82	173	
	Newaukum River & North Fork	WSH	Marked									2	15	60		77	
Unmarked											0	0	27		27		
Total											2	15	87		104		
Satsop River, Middle & East Fk	SSH	Marked								2					2		
		Unmarked								0					0		
	WSH	Marked										7	20	13	40		
		Unmarked										0	2	2	4		
		Total									7	22	15	44			
Satsop River West Fork	WSH	Marked										2			2		
		Unmarked										0			0		
		Total										2			2		
Skookumchuck River	WSH	Marked										5	45	80	52	182	
		Unmarked										0	0	10	10	20	
		Total										5	45	90	62	202	

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)

COAST RIVERS AND MARINE CATCH AREAS																
System	Catch Area	Race	Marked/ Unmarked	1998						1999						Total
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr ⁴	
CHEHALIS RIVER SYSTEM* (continued)	Van Winkle Creek	WSH	Marked							7		5				12
			Unmarked							0		0				0
			Total							7		5				12
	Wishkah River	SSH	Marked						4							4
			Unmarked						0							0
			Total						4							4
		WSH	Marked									27	5	17		49
			Unmarked									0	0	0		0
			Total									27	5	17		49
	Wynoochee River	SSH	Marked		142	116	86	54	66							464
			Unmarked		2	0	0	2	0							4
			Total		144	116	86	56	66							468
	WSH	Marked							20	25	204	229	295	2	775	
		Unmarked							0	2	5	0	2	0	9	
		Total							20	27	209	229	297	2	784	
Chehalis River System	SSH	Marked		142	118	88	62	68							478	
		Unmarked		2	0	0	2	2							6	
		Total		144	118	88	64	70							484	
	WSH	Marked							34	29	302	358	517	59	1,299	
		Unmarked							0	2	5	7	83	10	107	
		Total							34	31	307	265	600	69	1,406	
ELK RIVER SYSTEM*	Elk River	WSH	Marked							6	3				9	
			Unmarked							0	0				0	
			Total							6	3				9	
GOODMAN CREEK SYSTEM*	Goodman Creek	WSH	Marked						3	42	48	12			105	
			Unmarked						0	6	6	18			30	
			Total						3	48	54	30			135	
HOH RIVER SYSTEM*	Hoh River	SSH	Marked			9									9	
			Unmarked			0									0	
			Total			9									9	
		WSH	Marked							3	3	3	3	0	12	
			Unmarked							0	0	0	0	9	9	
			Total							3	3	3	3	9	21	
	Hoh River above Hwy. 101	SSH	Marked		4		30	17	9						60	
			Unmarked		0		0	0	0						0	
Total				4		30	17	9						60		
	WSH	Marked						3		53	22	3	3	84		
		Unmarked						0		3	3	13	3	22		
		Total						3		56	25	16	6	106		

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)

COAST RIVERS AND MARINE CATCH AREAS																
System	Catch Area	Race	Marked/ Unmarked	1998						1999					Total	
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar		Apr ⁴
HOH RIVER SYSTEM (continued)	Hoh River below Hwy. 101	SSH	Marked	4	0	73	47	34								158
			Unmarked	9	4	0	0	9								22
			Total	13	4	73	47	43								180
	Hoh River System	SSH	Marked	8	9	103	64	43								227
			Unmarked	9	4	0	0	9								22
			Total	17	13	103	64	52								249
	Hoh River System	WSH	Marked							3	19	214	94	106	69	505
			Unmarked							0	3	51	50	141	171	416
Total									3	22	265	144	247	240	921	
HOQUIAM RIVER SYSTEM*	Hoquiam River	WSH	Marked								12	12			24	
			Unmarked								0	0			0	
			Total									12	12			24
HUMPTULIPS RIVER SYSTEM*	Humptulips River	SSH	Marked	30	17	4	4	4							59	
			Unmarked	0	0	0	0	0							0	
			Total	30	17	4	4	4								59
	Humptulips River	WSH	Marked							14	35	47	5		101	
			Unmarked							0	0	0	0		0	
			Total							14	35	47	5		101	
	Humptulips River East Fork	WSH	Marked						2						2	
			Unmarked						0						0	
			Total						2						2	
	Humptulips River West Fork	WSH	Marked											0	0	
			Unmarked											1	1	
			Total											1	1	
	Stevens Creek	SSH	Marked		2										2	
			Unmarked		0										0	
Total				2										2		
Stevens Creek	WSH	Marked							4	32	14	8		58		
		Unmarked							1	0	1	0		2		
		Total							5	32	15	8		60		
Humptulips River System	SSH	Marked	30	19	4	4	6							63		
		Unmarked	0	0	0	0	0							0		
		Total	30	19	4	4	6							63		
Humptulips River System	WSH	Marked							18	67	61	13	0	159		
		Unmarked							1	0	1	0	1	3		
		Total							19	67	62	13	1	162		

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)															
COAST RIVERS AND MARINE CATCH AREAS															
System	Catch Area	Race	Marked/ Unmarked	1998					1999					Total	
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb		Mar
JOHNS RIVER SYSTEM*	Johns River	WSH	Marked								3	3	3		9
			Unmarked								0	0	0		0
			Total								3	3	3		9
KALALOCH CREEK SYSTEM*	Kalaloch Creek	WSH	Marked									0			0
			Unmarked									3			3
			Total									3			3
MOSQUITO RIVER SYSTEM*	Mosquito Creek	WSH	Marked								12		12		24
			Unmarked								0		6		6
			Total								12		18		30
NASELLE RIVER SYSTEM	Naselle River	SSH	Marked						2						2
			Unmarked						0						0
			Total						2						2
		WSH	Marked							21	18	6	6		51
			Unmarked							0	0	0	0		0
			Total							21	18	6	6		51
	Salmon Creek (Pacific Co.)	SSH	Marked						0						0
			Unmarked						2						2
		Total						2						2	
		WSH	Marked							3	3				6
	Unmarked								0	0				0	
	Total							3	3				6		
Naselle River System	SSH	Marked						2						2	
		Unmarked						2						2	
	Total						4						4		
	WSH	Marked							24	21	6	6		57	
Unmarked								0	0	0	0		0		
Total							24	21	6	6		57			
NEMAH RIVER SYSTEM	Nemah River	SSH	Marked						2						2
			Unmarked						0						0
			Total						2						2
	WSH	Marked							9	12	3	3		27	
		Unmarked							0	0	0	0		0	
		Total							9	12	3	3		27	
Williams Creek	WSH	Marked							3					3	
		Unmarked							0					0	
		Total							3					3	

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)																
COAST RIVERS AND MARINE CATCH AREAS																
System	Catch Area	Race	Marked/ Unmarked	1998						1999					Total	
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar		Apr ⁴
NEMAH RIVER SYSTEM (continued)	Nemah River System	SSH	Marked													2
			Unmarked													0
			Total													2
		WSH	Marked								12	12	3	3		30
			Unmarked								0	0	0	0		0
			Total								12	12	3	3		30
NORTH RIVER SYSTEM	North River	SSH	Marked			5	5									10
			Unmarked			0	0									0
			Total			5	5									10
		WSH	Marked								9	9	12			30
			Unmarked								0	0	0			0
			Total								9	9	12			30
	Smith Creek	WSH	Marked									21	6	6		33
			Unmarked									0	0	0		0
			Total									21	6	6		33
NORTH RIVER SYSTEM	North River System	SSH	Marked			5	5									10
			Unmarked			0	0									0
			Total			5	5									10
		WSH	Marked								9	30	18	6		63
			Unmarked								0	0	0	0		0
			Total								9	30	18	6		63
OZETTE RIVER SYSTEM*	Big River	WSH	Marked									3				3
			Unmarked									0				0
			Total									3				3
	Ozette River	WSH	Marked										9	3		12
			Unmarked										3	0		3
			Total										12	3		15
	Ozette River System	WSH	Marked									3	9	3		15
			Unmarked									0	3	0		3
			Total									3	12	3		18
PALIX RIVER SYSTEM	Palix River	SSH	Marked						5							5
			Unmarked						0							0
			Total						5							5
		WSH	Marked								18	15	3			36
			Unmarked								0	3	0			3
			Total								18	18	3			39

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)																
COAST RIVERS AND MARINE CATCH AREAS																
System	Catch Area	Race	Marked/ Unmarked	1998					1999					Total		
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb		Mar	Apr ¹
QUEETS RIVER SYSTEM*	Clearwater River	WSH	Marked									3	0	0	3	6
			Unmarked									9	15	83	46	153
			Total									12	15	83	49	159
	Queets River	SSH	Marked						57							57
			Unmarked						0							0
			Total						57							57
		WSH	Marked							31	9	9		3	0	52
			Unmarked							27	6	19		12	15	79
			Total							58	15	28		15	15	131
	Salmon River (Jefferson Co.)	WSH	Marked							12	46	71	6			135
Unmarked									6	40	49	28			123	
Total									18	86	120	34			258	
Queets River System	SSH	Marked						57							57	
		Unmarked						0							0	
		Total						57							57	
	WSH	Marked							43	55	83	6	3	3	193	
		Unmarked							33	46	77	43	95	61	355	
		Total							76	101	160	49	98	64	548	
QUILLAYUTE RIVER SYSTEM*	Bogachiel River	SSH	Marked		7			4	11							22
			Unmarked		0			0	0							0
			Total		7			4	11							22
		WSH	Marked							153	711	404	34	37	17	1,356
			Unmarked							7	43	90	33	160	86	419
			Total							160	754	494	67	197	103	1,775
	Calawah River, and South Fork	SSH	Marked		45	19	22	22	52							160
			Unmarked		0	0	0	0	0							0
			Total		45	19	22	22	52							160
		WSH	Marked							240	450	260	23	3	3	979
Unmarked									0	7	27	10	70	27	141	
Total									240	457	287	33	73	30	1,120	
Dickey River	WSH	Marked								0		0	0	0	0	
		Unmarked								3		7	13	3	26	
		Total								3		7	13	3	26	
Quillayute River	SSH	Marked					4	11							15	
		Unmarked					0	0							0	
		Total					4	11							15	
	WSH	Marked							7	43	33	7	7	0	97	
		Unmarked							0	7	27	43	20	30	127	
		Total							7	50	60	50	27	30	224	

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)																	
COAST RIVERS AND MARINE CATCH AREAS																	
System	Catch Area	Race	Marked/ Unmarked	1998						1999						Total	
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr ⁴		
QUILLAYUTE RIVER SYSTEM* (continued)	Sol Duc River	SSH	Marked			11	7	4	37							59	
			Unmarked			0	0	0	0							0	
			Total			11	7	4	37							59	
		WSH		Marked							30	34	120	53	33	10	280
				Unmarked							0	13	114	171	251	137	686
				Total							30	47	234	224	284	147	966
	Quillayute River System	SSH		Marked		52	30	29	34	111							256
				Unmarked		0	0	0	0	0							0
WSH			Total		52	30	29	34	111							256	
			Marked								430	1,238	817	117	80	30	2,712
	Unmarked		Unmarked							7	73	258	264	514	283	1,399	
			Total							437	1,311	1,075	381	594	313	4,111	
QUINAULT RIVER SYSTEM*	Quinault River, Lower and Cook Ck. ²	WSH	Marked								308	341	127	25	10	811	
			Unmarked								0	3	59	166	96	324	
			Total								308	344	186	191	106	1,135	
	Quinault River, Upper	WSH		Marked							4		8	23	12	47	
				Unmarked						0		0	4	81	85		
				Total						4		8	27	93	132		
	Quinault River System	WSH		Marked							4	308	349	150	37	10	858
				Unmarked						0	0	3	63	247	96	409	
				Total						4	308	352	213	284	106	1,267	
SUEZ (SOOES) RIVER SYSTEM*	Sooes River	WSH	Marked								0	0				0	
			Unmarked								15	3				18	
			Total								15	3				18	
WILLAPA RIVER SYSTEM	Willapa River	SSH	Marked		8											8	
			Unmarked		0											0	
			Total		8											8	
		WSH		Marked								32	65	12	12	121	
				Unmarked							0	3	3	3	9		
				Total						32	68	15	15	130			
	Willapa River, South Fork	SSH		Marked		8											8
				Unmarked		0											0
WSH			Total		8											8	
			Marked								9	12	3			24	
	Unmarked		Unmarked							0	0	0			0		
			Total						9	12	3			24			

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)																	
COAST RIVERS AND MARINE CATCH AREAS																	
System	Catch Area	Race	Marked/ Unmarked	1998					1999					Total			
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb		Mar	Apr ⁴	
WILLAPA RIVER SYSTEM (continued)	Willapa River System	SSH	Marked	8	8										16		
			Unmarked	0	0											0	
			Total	8	8										16		
		WSH	Marked								41	77	15	12	145		
			Unmarked									0	3	3	3	9	
			Total								41	80	18	15	154		
MARINE CATCH AREAS	Area 1: Ledbetter Point	SSH	Marked				1			1					2		
			Unmarked				0			0						0	
			Total				1			1					2		
		WSH	Marked								3			0	3		
			Unmarked									0		2	2		
			Total								3		2	2	5		
COAST RIVERS/STREAMS, AND MARINE AREAS TOTALS		SSH	Marked	240	189	230	164	297								1,120	
			Unmarked	11	4	0	2	13									30
			Total	251	193	230	166	310								1,150	
		WSH	Marked								538	1,883	2,050	831	773	171	6,246
			Unmarked									41	145	413	457	1,086	621
			Total								579	2,028	2,463	1,288	1,859	792	9,009
PUGET SOUND AND STRAIT OF JUAN DE FUCA RIVER SYSTEMS AND MARINE CATCH AREAS																	
CLALLAM RIVER SYSTEM*	Clallam River	SSH	Marked							3					3		
			Unmarked							0						0	
			Total							3					3		
		WSH	Marked								6	31	28	12	77		
			Unmarked									0	3	6	0	9	
			Total								6	34	34	12	86		
DAKOTA CREEK SYSTEM*	Dakota Creek	WSH	Marked										0		0		
			Unmarked											3		3	
			Total										3		3		
DESCHUTES RIVER SYSTEM*	Deschutes River	SSH	Marked			3									3		
			Unmarked			3										3	
			Total			6									6		
		WSH	Marked									3			3		
			Unmarked									3			3		
			Total								6				6		
	Percival Creek	SSH	Marked					6							6		
			Unmarked					0								0	
			Total					6							6		

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)																
PUGET SOUND AND STRAIT OF JUAN DE FUCA RIVER SYSTEMS AND MARINE CATCH AREAS																
System	Catch Area	Race	Marked/ Unmarked	1998					1999					Total		
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb		Mar	Apr ⁴
DESCHUTES RIVER SYSTEM* (continued)	Deschutes River System	SSH	Marked			3			6							9
			Unmarked			3			0							3
			Total			6			6							12
		WSH	Marked									3				3
			Unmarked								3				3	
			Total								6				6	
DUCKABUSH RIVER SYSTEM*	Duckabush River	SSH	Marked												3	3
			Unmarked												0	0
			Total												3	3
		WSH	Marked												3	3
			Unmarked											0	0	
			Total											3	3	
DUNGENESS RIVER SYSTEM*	Dungeness River	SSH	Marked												3	3
			Unmarked												0	0
			Total												3	3
		WSH	Marked										15	42	9	0
			Unmarked									0	4	0	9	13
			Total									15	46	9	9	79
EAST TWIN RIVER SYSTEM*	East Twin River	WSH	Marked									3	3	0		6
			Unmarked									0	0	3		3
			Total									3	3	3		9
ELWHA RIVER SYSTEM*	Elwha River	SSH	Marked		10		3	6	16							35
			Unmarked		0		0	0	0							0
			Total		10		3	6	16							35
		WSH	Marked									37	49	34	12	132
			Unmarked								0	0	0	0	0	
			Total								37	49	34	12	132	
GREEN-DUWAMISH RIVER SYSTEM*	Green-Duwamish River	SSH	Marked		15	90	116	45	142							408
			Unmarked		4	15	15	4	15							53
			Total		19	105	131	49	157							461
		WSH	Marked									139	225	146	68	30
			Unmarked								19	32	92	39	2	184
			Total								158	257	238	107	32	792
HOKO RIVER SYSTEM*	Hoko River	SSH	Marked												8	8
			Unmarked												0	0
			Total												8	8
		WSH	Marked									25	102	42	6	5
			Unmarked								0	9	36	22	28	95
			Total								25	111	78	28	33	275

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)															
PUGET SOUND AND STRAIT OF JUAN DE FUCA RIVER SYSTEMS AND MARINE CATCH AREAS															
System	Catch Area	Race	Marked/ Unmarked	1998					1999					Total	
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb		Mar
LAKE WASHINGTON SYSTEM*	Union Lake, Ship Canal	WSH	Marked									3			3
			Unmarked									0			0
	Total									3			3		
	Sammamish R.	SSH	Marked			0	3	10							13
			Unmarked			6	3	0							9
			Total			6	6	10							22
	Lake Washington System	SSH	Marked			0	3	10							13
			Unmarked			6	3	0							9
Total			6	6	10								22		
Lake Washington System	WSH	Marked							6					6	
		Unmarked							0					0	
Total								6					6		
LITTLE QUILCENE RIVER SYSTEM*	Little Quilcene River	WSH	Marked								3	3			6
			Unmarked								0	0			0
			Total								3	3			6
			Total								3	3			6
LYRE RIVER SYSTEM*	Lyre River	SSH	Marked		1	3	3	3	6						16
			Unmarked		0	0	0	0	0						0
			Total		1	3	3	3	6						16
		WSH	Marked							47	202	159	7		415
Unmarked							0	4	29	4		37			
Total							47	206	188	11		452			
MILL CREEK SYSTEM*	Mill Creek (Mason Co.)	WSH	Marked								3				3
			Unmarked								0				0
			Total								3				3
MISSION CREEK SYSTEM*	Mission Creek	SSH	Marked			3									3
			Unmarked			0									0
			Total			3									3
MORSE CREEK SYSTEM*	Morse Creek	SSH	Marked						3						3
			Unmarked						0						0
			Total						3						3
		WSH	Marked							3	31	19			53
Unmarked							0	0	0			0			
Total							3	31	19			53			
NISQUALLY RIVER SYSTEM*	Nisqually River	WSH	Marked											3	3
			Unmarked											0	0
			Total											3	3

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)															
PUGET SOUND AND STRAIT OF JUAN DE FUCA RIVER SYSTEMS AND MARINE CATCH AREAS															
System	Catch Area	Race	Marked/ Unmarked	1998					1999					Total	
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb		Mar
NOOKSACK RIVER SYSTEM*	Nooksack River	WSH	Marked										3		3
			Unmarked										0		0
			Total										3		3
	Nooksack River, Middle Fork	WSH	Marked								3	25			28
			Unmarked								0	0			0
			Total								3	25			28
NOOKSACK RIVER SYSTEM (continued)	Nooksack River, Mainstem	SSH	Marked					3	3						6
			Unmarked					0	0						0
		Total					3	3						6	
		WSH	Marked							0	15	9	6		30
		Unmarked							3	0	0	0		3	
		Total							3	15	9	6		33	
NOOKSACK RIVER SYSTEM (continued)	Nooksack River System	SSH	Marked					3	9						12
			Unmarked					0	0						0
		Total					3	9						12	
		WSH	Marked							0	3	56	15	9	83
		Unmarked							3	0	3	3	3	12	
		Total							3	3	59	18	12	95	
PUYALLUP RIVER SYSTEM*	Carbon River	SSH	Marked			20		20							40
			Unmarked			0		0							0
		Total			20		20							40	
		WSH	Marked							10	5	15			30
		Unmarked							0	0	5			5	
		Total							10	5	20			35	
PUYALLUP RIVER SYSTEM*	Puyallup River	WSH	Marked							95	139	80	40	0	354
			Unmarked							0	10	0	0	5	15
		Total							95	149	80	40	5	369	
PUYALLUP RIVER SYSTEM*	Stuck (White) River	WSH	Marked								5	10	5		20
			Unmarked								0	5	0		5
		Total								5	15	5		25	

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)																	
PUGET SOUND AND STRAIT OF JUAN DE FUCA RIVER SYSTEMS AND MARINE CATCH AREAS																	
System	Catch Area	Race	Marked/ Unmarked	1998						1999						Total	
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr ⁴		
PUYALLUP RIVER SYSTEM* (continued)	Puyallup River System	SSH	Marked			20		20								40	
			Unmarked			0		0								0	
	Total			20		20									40		
	WSH	Marked									10	100	159	90	45	0	404
Unmarked										0	0	15	5	0	5	25	
Total										10	100	174	95	45	5	429	
PYSHT RIVER SYSTEM*	Pysht River	SSH	Marked			3										3	
			Unmarked			0										0	
	Total			3											3		
	WSH	Marked									6	19	16	15			56
Unmarked										0	6	43	22			71	
Total										6	25	59	37			127	
QUILCENE RIVER SYSTEM*	Quilcene River	WSH	Marked									3				3	
			Unmarked										9			9	
			Total											12			12
SALT CREEK SYSTEM*	Salt Creek	WSH	Marked									3		3		6	
			Unmarked									0		0		0	
			Total										3		3		6
SAMISH RIVER SYSTEM*	Samish River	WSH	Marked							3	15	22	9	6		55	
			Unmarked								0	0	0	0	0		0
			Total									3	15	22	9	6	
SEKIU RIVER SYSTEM*	Sekiu River	WSH	Marked									3	10	3		16	
			Unmarked										6	9	6		21
			Total											9	19	9	
SKAGIT RIVER SYSTEM*	Suiattle River	SSH	Marked			3										3	
			Unmarked			0										0	
			Total			3										3	
	Cascade River	SSH	Marked												13	13	
			Unmarked												0	0	
			Total													13	
	WSH	Marked									45	49	36			130	
		Unmarked									0	0	5			5	
Total										45	49	41			135		
Sauk River	SSH	Marked			7		3	0								10	
		Unmarked			0		0	3								3	
	Total			7		3	3								13		
	WSH	Marked									8	0	4	24	0	0	36
Unmarked										0	8	16	94	4	4	126	
Total										8	8	20	118	4	4	162	

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)																
PUGET SOUND AND STRAIT OF JUAN DE FUCA RIVER SYSTEMS AND MARINE CATCH AREAS																
System	Catch Area	Race	Marked/ Unmarked	1998						1999					Total	
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar		Apr ⁴
SKAGIT RIVER SYSTEM (continued)	Skagit River	SSH	Marked	13	23	7	7	34								84
			Unmarked	0	7	0	0	0								7
			Total	13	30	7	7	34								91
	Skagit River System	SSH	Marked	13	33	7	10	47								110
			Unmarked	0	7	0	0	3								10
			Total	13	40	7	10	50								120
	Skagit River System	WSH	Marked							61	191	199	77	33	0	561
			Unmarked							4	49	175	770	28	4	1,030
Total									65	240	374	847	61	4	1,591	
SKOKOMISH RIVER SYSTEM*	Skokomish River South Fork and North Fork	WSH	Marked							3	3			3	9	
			Unmarked							0	0			3	3	
			Total							3	3			6	12	
SNOHOMISH RIVER SYSTEM*	Pilchuck River	WSH	Marked								13	67	29		109	
			Unmarked								6	54	124		184	
			Total								19	121	153		293	
	Raging River	SSH	Marked												45	
			Unmarked												4	
			Total												49	
	Raging River	WSH	Marked								64	82	48		194	
			Unmarked								3	10	0		13	
			Total								67	92	48		207	
	Skykomish River	SSH	Marked	15	263	766	642	506	510						2,702	
			Unmarked	0	15	0	15	23	8						61	
			Total	15	278	766	657	529	518						2,763	
	Skykomish River	WSH	Marked							490	477	606	87	35	3	1,698
			Unmarked							3	29	87	132	3	3	257
Total									493	506	693	219	38	6	1,955	
Skykomish River, North Fork	SSH	Marked	4	26	15	7	34							86		
		Unmarked	19	4	0	4	0							27		
		Total	23	30	15	11	34							113		
Skykomish River, North Fork	WSH	Marked							35	28	48	19		130		
		Unmarked							0	4	3	6		13		
		Total							35	32	51	25		143		
Skykomish River, South Fork	SSH	Marked	4	4	15		8							31		
		Unmarked	0	4	0		0							4		
		Total	4	8	15		8							35		

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)																
PUGET SOUND AND STRAIT OF JUAN DE FUCA RIVER SYSTEMS AND MARINE CATCH AREAS																
System	Catch Area	Race	Marked/ Unmarked	1998						1999						Total
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr ⁴	
SNOHOMISH RIVER SYSTEM* (continued)	Skykomish River, South Fork (cont.)	WSH	Marked							3	3					6
			Unmarked							0	3					3
			Total							3	6					9
	Snohomish River	SSH	Marked		150	83	4		26							263
			Unmarked		4	0	0		0							4
			Total		154	83	4		26							267
	Snohomish River	WSH	Marked							45	277	87	19	3		431
			Unmarked							0	22	113	210	0		345
			Total							45	299	200	229	3		776
	Snoqualmie River	SSH	Marked		38	191	124	165	146							664
			Unmarked		0	0	0	8	0							8
			Total		38	191	124	173	146							672
	Snoqualmie River	WSH	Marked							67	331	321	67	35		821
			Unmarked							0	25	96	79	10		210
			Total							67	356	417	146	45		1,031
	Sultan River	SSH	Marked		4	4		8								16
			Unmarked		0	0		0								0
			Total		4	4		8								16
	Sultan River	WSH	Marked								29	3	3			35
			Unmarked								3	0	7			10
Total										32	3	10			45	
Tokul Creek	SSH	Marked				4	0								4	
		Unmarked				0	4								4	
		Total				4	4								8	
Tokul Creek	WSH	Marked							3	134	232	127	25	3	524	
		Unmarked							0	3	3	0	0	0	6	
		Total							3	137	235	127	25	3	530	
Tolt River	SSH	Marked			4			4							8	
		Unmarked			0			0							0	
		Total			4			4							8	
Tolt River	WSH	Marked							10	22	19	6			57	
		Unmarked							0	0	6	10			16	
		Total							10	22	25	16			73	
Wallace River	WSH	Marked							38	194	70	0			302	
		Unmarked							0	3	0	3			6	
		Total							38	197	70	3			308	
Snohomish River System	SSH	Marked	4	463	1,074	812	678	773							3,804	
		Unmarked	0	38	8	15	39	12							112	
		Total	4	501	1,082	827	717	785							3,916	

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)																	
PUGET SOUND AND STRAIT OF JUAN DE FUCA RIVER SYSTEMS AND MARINE CATCH AREAS																	
System	Catch Area	Race	Marked/ Unmarked	1998						1999						Total	
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr ⁴		
SNOHOMISH RIVER SYSTEM* (continued)	Snohomish River System (cont.)	WSH	Marked							755	1,590	1,501	357	98	6	4,307	
			Unmarked							6	108	362	571	13	3	1,063	
			Total							761	1,698	1,863	928	111	9	5,370	
SQUALICUM CREEK SYSTEM*	Squalicum Creek	WSH	Marked										6			6	
			Unmarked										0			0	
			Total										6			6	
STILLAGUAMISH RIVER SYSTEM*	Canyon Creek	SSH	Marked			6	3	15	44							68	
			Unmarked			0	0	0	3							3	
			Total			6	3	15	47							71	
		WSH	Marked							16	36	96	56				204
			Unmarked							0	0	40	20				60
			Total							16	36	136	76				264
	Jim Creek	WSH	Marked									4				4	
			Unmarked									0				0	
			Total									4				4	
	Pilchuck Creek	SSH	Marked			3										3	
			Unmarked			0										0	
			Total			3										3	
		WSH	Marked										12				12
			Unmarked										8				8
			Total										20				20
	Stillaguamish River	SSH	Marked			3										3	
			Unmarked			0										0	
			Total			3										3	
		WSH	Marked								4	4	4				12
			Unmarked								0	0	0				0
			Total								4	4	4				12
	Stillaguamish River, North Fork	SSH	Marked			12	56	0	6	47						121	
			Unmarked			0	0	6	3	0						9	
			Total			12	56	6	9	47						130	
WSH		Marked							76	288	132	16		0		512	
		Unmarked							0	24	36	40		8		108	
		Total							76	312	168	56		8		620	
Stillaguamish River, South Fork	SSH	Marked			9			12	12						33		
		Unmarked			0			0	3						3		
		Total			9			12	15						36		
	WSH	Marked									4	4				8	
		Unmarked									8	0				8	
		Total									12	4				16	

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)																	
PUGET SOUND AND STRAIT OF JUAN DE FUCA RIVER SYSTEMS AND MARINE CATCH AREAS																	
System	Catch Area	Race	Marked/ Unmarked	1998						1999						Total	
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr ⁴		
STILLAGUAMISH RIVER SYSTEM* (continued)	Stillaguamish River System	SSH	Marked	3	15	65	3	33	103							222	
			Unmarked	0	0	0	6	3	6							15	
			Total	3	15	65	9	36	109								237
		WSH	Marked							92	328	236	96		0	752	
			Unmarked							0	24	84	68		8	184	
			Total							92	352	320	164		8	936	
TAHUYA RIVER SYSTEM*	Tahuya River	WSH	Marked										6			6	
			Unmarked										6			6	
			Total										12			12	
WHATCOM CREEK SYSTEM*	Whatcom Creek	WSH	Marked							3	10	6				19	
			Unmarked							0	9	3				12	
			Total							3	19	9					31
MARINE CATCH AREAS*	Area 5: West Juan de Fuca Strait	SSH	Marked						3							3	
			Unmarked						0							0	
			Total						3								3
			WSH	Marked									0				0
				Unmarked									6				6
				Total									6				6
		Area 6: East Juan de Fuca Strait	SSH	Marked		0											0
				Unmarked		10											10
				Total		10											10
		Area 7: San Juan Islands	SSH	Marked			3										3
				Unmarked			0										0
				Total			3										3
		Area 8: Skagit Bay-Port Susan	SSH	Marked		3											3
				Unmarked		0											0
		Total			3											3	
	Area 9: Admiralty Inlet	SSH	Marked				6									6	
				Unmarked			0									0	
				Total				6									6
		WSH	Marked							25	88	38	13	7	6	177	
			Unmarked							6	0	6	0	6	0	18	
			Total							31	88	44	13	13	6	195	
	Area 10: North Puget Sound	WSH	Marked											0		0	
				Unmarked										6		6	
				Total										6		6	

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)																	
PUGET SOUND AND STRAIT OF JUAN DE FUCA RIVER SYSTEMS AND MARINE CATCH AREAS																	
System	Catch Area	Race	Marked/ Unmarked	1998						1999						Total	
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr ⁴		
MARINE CATCH AREAS* (continued)	Area 11: Puget Sound, Middle	SSH	Marked				6								6		
			Unmarked				10								10		
			Total				16								16		
	Area 13: South Puget Sound	SSH	Marked				3			0					3		
			Unmarked				0			3					3		
			Total				3			3					6		
	Marine Catch Areas	SSH	Marked		3	3	15	3	0						24		
			Unmarked		10	0	10	0	3						23		
Total				13	3	25	3	3						47			
WSH		Marked									25	88	44	13	7	6	183
		Unmarked									6	0	6	6	12	0	30
	Total									31	88	50	19	19	6	213	
PUGET SOUND, STRAIT OF JUAN DE FUCA RIVER SYSTEMS AND MARINE CATCH AREAS TOTALS	SSH	Marked	22	520	1,303	962	825	1,108								4,740	
		Unmarked	0	52	39	49	46	39								225	
		Total	22	572	1,342	1,011	871	1,147								4,965	
	WSH	Marked								1,221	3,023	2,728	804	242	12	8,030	
		Unmarked								38	262	867	1,528	98	20	2,813	
		Total								1,259	3,285	3,595	2,332	340	32	10,843	

Table 33. 1998-99 Steelhead Sport Catch, by Area and Month (continued)

STATEWIDE STEELHEAD HARVEST SUMMARY, 1998-1999															
SYSTEM	RUN TYPE	MARKED/ UNMARKED	1998						1999						TOTAL
			MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR ⁴	
NON-BOLDT CASE AREAS	SSH	Marked	507	1,875	2,753	5,314	4,185	4,808	3,883	1,627	795	673	698	146	27,264
		Unmarked	20	28	74	159	159	156	96	43	30	29	4	0	798
		Total	527	1,903	2,827	5,473	4,344	4,964	3,979	1,670	825	702	702	146	28,062
	WSH	Marked							417	1,872	1,713	385	262	174	4,823
		Unmarked							6	74	88	13	23	27	231
		Total							423	1,946	1,801	398	285	201	5,054
BOLDT CASE AREAS*	SSH	Marked	22	752	1,479	1,186	989	1,395							5,823
		Unmarked	0	63	43	49	48	50							253
		Total	22	815	1,522	1,235	1,037	1,445							6,076
	WSH	Marked							1,749	4,799	4,615	1,587	988	183	13,921
		Unmarked							79	407	1,274	1,982	1,179	641	5,562
		Total							1,828	5,206	5,889	3,569	2,167	824	19,483
TOTAL	SSH	Marked	529	2,627	4,232	6,500	5,174	6,203	3,883	1,627	795	673	698	146	33,087
		Unmarked	20	91	117	208	207	206	96	43	30	29	4	0	1,051
		Total	549	2,718	4,349	6,708	5,381	6,409	3,979	1,670	825	702	702	146	34,138
	WSH	Marked							2,166	6,671	6,328	1,972	1,250	357	18,744
		Unmarked							85	481	1,362	1,995	1,202	668	5,793
		Total							2,251	7,152	7,690	3,967	2,452	1,025	24,537
TOTAL RIVERS ³			14	42	55	59	58	77	76	100	118	102	70	32	803

* Boldt case area river/stream system (Western Washington only).

¹ The majority of the Columbia River System steelhead are summer-runs.

² Winter steelhead catches are from angler surveys conducted by the Quinault Indian Nation.

³ Total number of rivers where steelhead were harvested during that month.

⁴ April 1999 harvests may be incomplete because a new license system went into effect on April 1 and anglers were issued new 1999-2000 CRC. Although anglers were required to record their April harvests on their old 1998-1999 CRC, they may actually have recorded them on the 1999-2000 card. Thus, some portions of the April harvests may not be documented until the 1999-2000 CRC are analyzed.

Table 34. 1998 Washington Sport Steelhead Fishing, by Residence

County of Residence	# Catch Record Cards	Population by County	% Catch Record Card Holders	Total Steelhead	Average Catch per Catch Record Card
Adams	178	15,900	1.12	110	0.62
Asotin	416	20,000	2.08	423	1.02
Benton	3,519	137,500	2.56	3,563	1.01
Chelan	174	62,600	.28	126	0.72
Clallum	3,349	66,700	5.02	3,546	1.06
Clark	8,672	328,000	2.64	3,156	0.36
Columbia	234	4,200	5.57	209	0.89
Cowlitz	5,585	93,100	6.00	3,013	0.54
Douglas	77	31,400	.25	55	0.71
Ferry	12	7,300	.16	0	0
Franklin	1,094	44,400	2.46	951	0.87
Garfield	24	2,400	.01	0	0
Grant	291	69,400	.42	137	0.47
Grays Harbor	1,469	67,900	2.16	1,045	0.71
Island	674	72,500	.93	220	0.33
Jefferson	234	26,500	.88	176	0.75
King	11,521	1,665,800	.69	7,466	0.65
Kitsap	1,981	229,000	.87	660	0.33
Kittitas	230	31,400	.73	33	0.14
Klickitat	738	19,100	3.86	275	0.37
Lewis	2,207	68,600	3.22	1,050	0.48
Lincoln	69	10,000	.69	71	1.03
Mason	617	48,300	1.28	445	0.72
Okanogan	77	38,400	.20	0	0
Pacific	597	21,500	2.78	401	0.67
Pend Oreille	125	11,200	1.12	137	1.10
Pierce	6,174	686,800	.90	3,002	0.49
San Juan	52	12,600	.41	16	0.31
Skagit	2,470	98,700	2.50	1,204	0.49
Skamania	141	9,900	1.42	154	1.09
Snohomish	8,357	568,100	1.47	6,510	0.78
Spokane	2,405	410,900	.59	1,770	0.74
Stevens	351	37,600	.93	286	0.81
Thurston	3,051	199,700	1.53	1,193	0.39
Wahkiakum	246	3,900	6.31	407	1.65
Walla Walla	1,812	54,600	3.32	1,770	0.98
Whatcom	1,981	157,500	1.26	1,457	0.74
Whitman	686	41,400	1.66	957	1.40
Yakima	3,725	210,500	1.77	3,689	0.99
Unknown WA	20	n/a	n/a	0	0
Washington Total	75,635	5,685,300	1.33	49,683	0.66
Other State Total	4,653	n/a	n/a	3,128	0.67
Canada	16	n/a	n/a	0	0
Unknown	2,837	n/a	n/a	5,861	2.07
Foreign	n/a	n/a	n/a	n/a	0
Grand Total	83,141	5,685,300	1.46	58,672	0.71

Note: The figures do not accurately multiply across because of bias adjustment factor and rounding of numbers.

Table 35. 1998 Frequency Distribution of Estimated Steelhead Catch Record Cards and Catch

#Steelhead per Catch Record Card	# of Cards	Cumulative # of Cards	Percent Cards	Cumulative Percent Cards	Total Catch	Cumulative Total Catch	Percent Catch	Cumulative Percent Catch
0	65,791	65,791	79.13	79.13	0	0	0.00	0.00
1	6,948	72,739	8.36	87.49	7227	7,227	12.32	12.31
2	3,517	76,256	4.23	91.72	7317	14,544	12.47	24.79
3	2,003	78,259	2.41	94.13	6251	20,795	10.65	35.44
4	1,380	79,639	1.66	95.79	5742	26,537	9.79	45.23
5	804	80,443	0.97	96.76	4184	30,721	7.13	52.36
6	599	81,042	0.72	97.48	3741	34,462	6.38	58.73
7	568	81,610	0.68	98.16	4134	38,596	7.05	65.78
8	355	81,965	0.43	98.59	2953	41,549	5.03	70.81
9	221	82,186	0.27	98.85	2067	43,616	3.52	74.33
10	189	82,375	0.23	99.08	1969	45,585	3.36	77.69
11	110	82,485	0.13	99.21	1263	46,848	2.15	79.84
12	134	82,619	0.16	99.37	1673	48,521	2.85	82.69
13	39	82,658	0.05	99.42	533	49,054	0.91	83.60
14	55	82,713	0.07	99.49	804	49,858	1.37	84.97
15	47	82,760	0.06	99.55	738	50,596	1.26	86.23
16	71	82,831	0.09	99.63	1181	51,777	2.01	88.24
17	47	82,878	0.06	99.69	837	52,614	1.43	89.67
18	47	82,925	0.06	99.74	886	53,500	1.51	91.18
19	39	82,964	0.05	99.79	779	54,279	1.33	92.51
20	32	82,996	0.04	99.83	656	54,935	1.12	93.62
21	16	83,012	0.02	99.85	345	55,280	0.59	94.21
22	16	83,028	0.02	99.87	361	55,641	0.62	94.83
23	24	83,052	0.03	99.90	566	56,207	0.97	95.79
24	8	83,060	0.01	99.91	197	56,404	0.34	96.13
25	8	83,068	0.01	99.92	205	56,609	0.35	96.48
26	16	83,084	0.02	99.93	427	57,036	0.73	97.21
27	16	83,100	0.02	99.95	443	57,479	0.76	97.96
28	8	83,108	0.01	99.96	230	57,709	0.39	98.35
29	16	83,124	0.02	99.98	476	58,185	0.81	99.16
30	16	83,140	0.02	100.00	492	58,677	0.84	100.00
Total	83,140		100.00		58,677		100.00	

Note: The figures do not accurately multiply across because of bias adjustment factor and rounding of numbers.

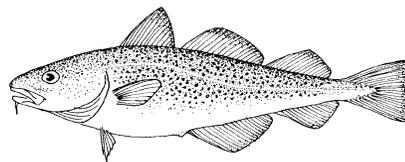
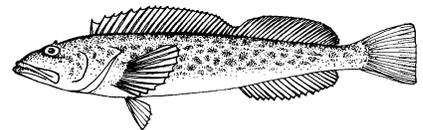
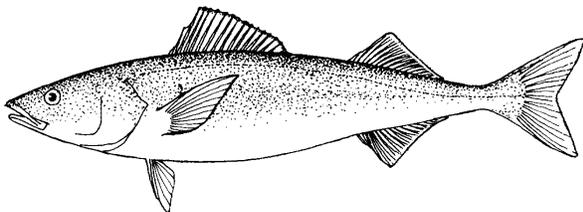
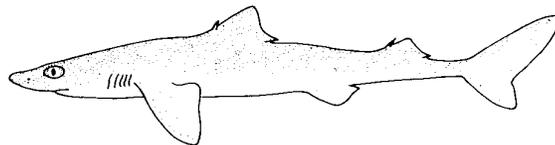
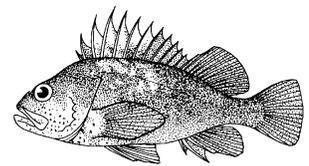
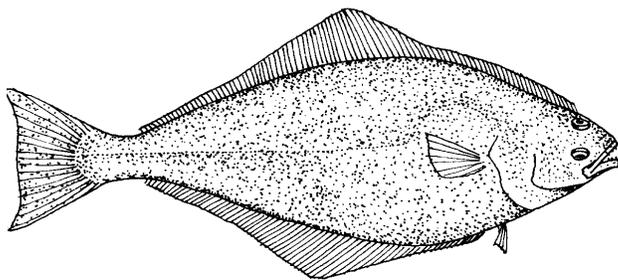
Table 36A. 1998-99 Sport Steelhead Technical Catch Data	
Records on File	Estimates and Calculations
Name and Address File	20,035
Catch Record Cards in Sample Returns	10,542
Correction Data	
Correction Factor Percentage of voluntarily returned catch records with matching names and addresses	831 / 834 = .996
Name/Address Corrected for Dealer Non-Response	20,035 / 0.996 = 20,115
Estimated Number of Catch Records Issued (Number of books divided by correction factor x Avg # of CRC's per book x 4 (sampled 25%))	1004 / .996 x 20.62 x 4 = 83,142
Catch Expansion Factor	83,142 / 10,542 = 7.92
Non-response bias adjustment based on telephone survey	1.02

Table 36B. 1998-99 Sport Steelhead Inventory of Catch Record Cards Received											
Response Code*	Number of Cards with Catch		Number of Cards without Catch		Total Cards	Number of Steelhead			Catch Per Card		
	Catch Records	Reminder Letters	Catch Records	Reminder Letters		Catch Records	Reminder Letters	Total Steelhead	Catch Records	Reminder Letters	Total
1	351	0	410	0	761	1,124	0	1,124	1.48	0	1.48
2	716	539	1,676	3,180	6,111	2,116	972	3,088	.89	.26	.51
4	128	185	329	1,156	1,798	306	308	614	.67	.23	.34
7	623	0	1,205	0	1,828	2,312	0	2,312	1.27	0	1.27
8	44	0	0	0	44	15	0	15	.34	0	.34
Total	1,862	724	3,620	4,336	10,542	5,873	1,280	7,153	1.07	.25	.68

Note: This table includes insample kept and released fish.

***Response Codes**
 1 Prior to any reminder sent
 2 After first reminder
 4 After second reminder
 7 From sporting goods dealer
 8 Unknown return date

Marine Fish



Species	Ilwaco	Westport	La Push	Neah Bay	Total
Black Rockfish	11,912	137,404	5,318	53,653	208,287
Canary Rockfish	149	10,245	271	3,116	13,781
China Rockfish	127	159	108	1,577	1,971
Yelloweye Rockfish	46	2,764	505	2,667	5,982
Blue Rockfish	402	1,691	174	3,395	5,662
Yellowtail Rockfish	142	26,302	495	4,197	31,136
Copper Rockfish	25	119	20	1,595	1,759
Quillback Rockfish	67	835	73	2,294	3,269
Bocaccio Rockfish	0	25	7	152	184
Vermillion Rockfish	8	14	2	205	229
Tiger Rockfish	10	22	28	146	206
Cabezon	81	342	100	1,584	2,107
Lingcod	309	3,557	976	7,770	12,612
Kelp Greenling	96	180	125	2,688	3,089
Pacific Halibut	239	2,641	352	16,989	20,221
Flatfish (general)	20	33	5	220	278
Pacific Cod	0	57	1	989	1,047
Cod (general)	73	51	12	15	151
Surfperch (general)	637	106	4	11	758
Skates & Rays	1	249	0	23	273
Rockfish (general)	492	208	90	184	974
Tuna	649	19,792	0	0	20,441
Miscellaneous	104	2,126	53	1,824	4,107
TOTAL	15,589	208,922	8,719	105,294	338,524

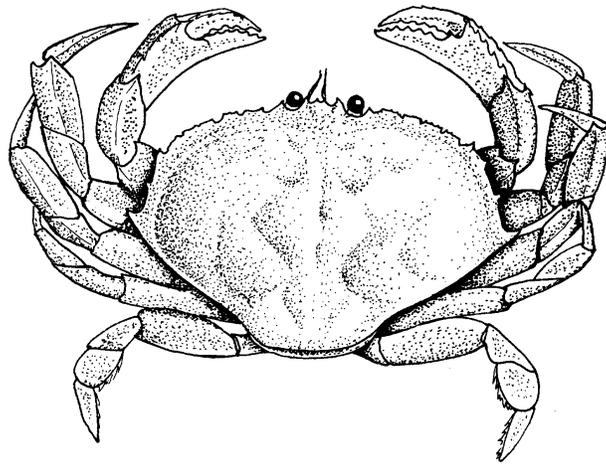
Year	South Coast Catch Areas 1-2	North Coast Catch Areas 3-4
1989	368	11,373
1990	392	4,958
1991	433	4,823
1992	1,740	6,870
1993	539	5,009
1994	651	2,876
1995	884	4,224
1996	877	4,431
1997	1,455	5,996
1998	2,940	6,127

Table 39. 1998 Sport Bottomfish Catch by Boat-Based Anglers in Puget Sound.

Species	Catch Record Area									Puget Sound Total
	5	6	7	8	9	10	11	12	13	
Pacific halibut										1,912
Flatfishes except halibut	29	145	397	3,260	3,300	6,719	9,366	2,746	12,078	38,040
Lingcod	41	0	131	142	101	85	59	8	156	723
Rockfishes	4,069	5,735	6,401	1,257	877	1,274	1,624	1,038	2,407	24,682
Pacific cod	0	0	0	9	0	1	12	0	0	22
Surfperches	0	28	5	8,076	0	175	57	0	405	8,746
Sculpins	35	22	271	181	266	86	392	0	273	1,526
Spiny dogfish	0	3	79	0	95	457	19	72	0	725
Misc. bottomfishes	821	1,777	2,009	2,015	9	59	68	0	210	6,968
Total	4,995	7,710	9,293	14,940	4,648	8,856	11,597	3,864	15,529	83,344

Note: The catch of Pacific halibut is estimated by a catch record for halibut, and catches are not available for individual catch areas. The Puget Sound catch of halibut includes fish caught between Sekiu and Cape Flattery (Catch Record Area 4B). Since 1994, substantial closures in the recreational salmon fishery have precluded complete boat-based recreational bottomfish estimates in most Puget Sound Catch Record Areas. The estimates appearing in this table, therefore, are incomplete.

Shellfish



Catch Area Code and Description (2)		User Trips (3)	Pounds of Clams Harvested							Total Clams	Number of Oysters	Pounds of Oysters (4)
			Manila Littleneck	Native Littleneck	Butter	Cockle	Soft Shell	Horse	Geoduck			
20A	Gulf of Georgia	26,801	5,361	31,591	36,063	4	2,476	2,826	0	78,321		
20B	North San Juan Islands	701	124	808	1055	0	103	112	0	2,202		
21A	Bellingham Bay	431	76	496	647	0	64	69	0	1,352		
21B	Samish Bay	3,620	482	3,369	4,424	0	460	459	0	9,194		
22A	South San Juan Islands	3,853	361	6,201	2,751	0	1,005	788	0	11,106		
22B	Padilla Bay	1,263	220	1,453	1,898	0	186	200	0	3,957		
24A	Skagit Bay	4,355	454	5,555	6,208	0	892	679	0.0	13,788		
24B	Port Susan	3,177	842	3,515	4,028	0	392	539		9,316		
24C	Saratoga Passage	28,110	2,591	35,458	60,833	1	4,195	5,533	0	108,611		
24D	Holmes Harbor	3,322	6,379	766	877	0	64	67	0	8,163		
25A	Eastern Juan de Fuca Strait	6,418	492	14,094	1,732	54	1,043	3,038	0	20,453		
25B	Admiralty Inlet	16,417	2,024	19.5	42,773	81	6,157	4,744	0	75,344		
25C	North Hood Canal	17,270	7,893	11,139	8,854	365	13,502	22,901	0	64,654	68,629	3,129
25D	Port Townsend Bay	890	75	1,115	1,196	4	205	332	0	2,927		
25E	Discovery Bay	611	63	908	973	3	167	270	0	2,384		
26A	Useless Bay/Possession Sound	9,541	210	6,231	15,218	30	846	417	221	23,173		
26B	Seattle/Elliott Bay/Pt Madison	3,796	110	2,658	3,320	18	329	132	115	6,682		
26C	Port Orchard	7,820	257	5,864	5,235	36	532	237	215	12,376		
26D	Vashon/Commencement Bay	3,999	93	2,185	3,022	9	818	144	95	6,366		
27A	North Central Hood Canal	37,615	52,910	7,712	18,203	336	10,347	7,772	1	97,281	240,030	10,945
27B	Central Hood Canal	10,772	3,225	2,200	3,821	122	1,481	1,683	0	12,532	135,391	6,174
27C	South Hood Canal	39,408	8,909	15,046	12,688	1,951	1,121	7,713	0	47,428	457,959	20,883
28A	Nisqually/Fox Island	3,586	1,833	2,265	8,557	25	4,190	34	1,825	18,729		
28B	Carr Inlet	3,098	2,859	951	3,488	29	4,284	42	415	12,068		
28C	Case Inlet	6,324	3,265	3,667	15,169	41	7,400	66	3,256	32,864		
28D	Budd, Eld, & Totten Inlets	3,655	853	2,717	10,858	37	2,791	45	2,524	19,825		
Total		246,853	101,961	187,529	273,891	60,842	3,146	65,050	8,667	701,086	902,009	41,131

Note:
 1. Includes both public and private tidelands.
 2. Boundaries of geographic areas are those prescribed by catch area.
 3. Includes combined clam and oyster users.
 4. Estimated weight of shucked meats.

Date	Pots Fished	Pounds	CPUE
May 16	5,660	18,640	3.29
May 20	3,530	15,890	4.50
May 23	4,840	21,360	4.41
May 27	2,110	7,860	3.73
June 3	1,520	6,260	4.12
June 4	1,310	5,530	4.23
TOTAL	18,970	75,540	3.98

Catch Code and Catch Area		Pot Days	Number of Dungeness Crabs
20A	Gulf of Georgia	38,005	62,199
20B	North of San Juan Islands	4,078	3,177
21A	Bellingham Bay	11,019	15,109
21B	Samish Bay	12,116	16,613
22A	San Juan Islands	107,711	82,887
22B	Anacortes	17,430	23,898
23D	Port Angeles Harbor	13,966	6,716
24A	Skagit Bay	52,393	55,191
24B	Port Susan	19,745	25,023
24C	Saratoga Passage	40,626	38,852
24D	Holmes Harbor	10,146	5,579
25A	Dungeness & Sequim Bays	27,330	23,206
25B	Admiralty Inlet	341	226
25C	Port Ludlow/Port Gamble	16,532	8,833
25D	Port Townsend Bay	21,905	8,021
25E	Discovery Bay	4,668	3,068
26A	Useless Bay, Port Gardner	21,060	14,511
26B	Seattle, Kingston	16,258	13,800
26C	Port Orchard	1,250	1,061
26D	Colvos Pass, East Pass	2,749	1,000
27A	Upper Hood Canal	41,086	61,079
27B	Central Hood Canal	10,410	10,712
27C	Lower Hood Canal	37,476	45,429
Total		528,300	526,190



The Washington Department of Fish and Wildlife will provide equal employment opportunities to all potential and existing employees without regard to race, creed, color, sex, sexual orientation, religion, age, marital status, national origin, disability, or Vietnam Era Veteran's Status. The Department is subject to Title VI of the Civil Rights Act of 1964 and Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination on the basis of race, color, national origin or handicap. If you believe you have been discriminated against in any Department program, activity, or facility, or if you want further information about Title VI or Section 504, write to: Office of Equal Opportunity, U.S. Department of Interior, Washington D.C. 20240, or Washington Department of Fish and Wildlife, 600 Capitol Way N., Olympia, WA 98501-1091.